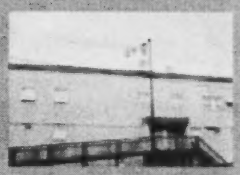

Health Centre Services Report

2007

July 2008

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English

Si vous voulez ces informations en français, contactez-nous.

French

Kīspin ki nitawihtīn ē nīhīyawihk ōma ācimōwin, tipwāsinān.

Cree

TŁĮCHǪ YATI K'ĘĘ. DI WEGODI NEWǪ DÈ, GOTS'O GONEDE.

Tłı̨chǫ

ʔERIHTŁ'ÍS DËNE SÚŁINÉ YATI T'A HUTS'ELKËR
XA BEYÁYATI THEʔĄ ʔAT'E, NUWE TS'ËN YÓŁTI.

Chipewyan

EDI GONDI DEHGÁH GOT'ĮE ZHATIÉ K'ÉÉ
EDATŁ'ÉH ENAHDDHĘ NIDE.

South Slavey

K'ÁHSHÓ GOT'ĮNE XƏDƏ K'É HEDERI
ʔEDĮHTL'É YERINIWĘ NÍDÉ DÚLE.

North Slavey

Jii gwandak izhii ginjìk vat'atr'ijąhch'uu zhit
yinohthan jì', diits'àt ginohkhìi.

Gwich'in

UVANITTUAQ ILITCHURISUKUPKU INUVIALUKTUN, QUQUAQLUTA.

Inuvialuktun

ᑕᒃᑯᐊ ᑎᑎᖅᑲᐅᑦ ᐱᓕᒍᒧᑦ ᐃᓄᒃᑎᑐᓕᖅᑐᑎᒃ,
ᐅᓪᓗᑎᓐᓄᑦ ᐅᖅᓯᓕᕐᓇᖅᑐᑎᑦ

Inuktitut

Hapkua titiqqat pijumagupkit Inuinnaqtun, uvaptinnut hivajarlutit.

Inuinnaqtun

1-867-920-3367

Message from the Minister

It is my pleasure as Minister of Health and Social Services to present the Health Centre Services Report 2007.

The Health Centre Services Report 2007 is the second in a series of reports detailing the utilization of health centre services by age and reason. The first report in this series, Hospital Services Report, 2006, was released in April 2007. The final report in this series will focus on physician services.

This report will help inform the public, health practitioners and decision-makers about the main reasons for health centre use. In doing so, the report points out that a substantial number of the health issues seen at health centres are preventable by making healthy lifestyle choices.

It is our objective that the Health Centre Services Report 2007 clearly illustrates the need for greater emphasis on promotion and prevention through policies that balance treatment services with promotion and prevention services, as highlighted in the Department of Health and Social Services' 2006 strategic plan, Shaping Our Future 2006-2010.

Honourable Sandy Lee
Minister of Health and Social Services

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Executive Summary

Health centres are an important part of the Northwest Territories (NWT) Health Care system. They are the first point of access of care for approximately 30% of the NWT population. The documentation of what occurs in these health centres is an important part of public accountability. This report fulfills part of that accountability by detailing the main reasons the public uses health centres.

The last report on health centre utilization by residents of the Northwest Territories was published in 2001. The NWT Health Services Report 2000 not only took a broad look at the utilization of health centre services but also examined the utilization of hospital and physician services. The two major findings of the report were: 1) health service utilization is primarily determined by age; and 2) that preventable conditions are responsible for a large proportion of health service utilization.

This report is the second in a series of shorter more focused reports that provide greater detail on a single health service area, examining the use of services by age group and by condition. The first report in this series, Hospital Services Report, 2006, was released in April 2007. This report focuses on health centre services provided to residents of the Northwest Territories between 2001/02 and 2005/06. The final report in this series will focus on physician services.

This report looks at health centre use by age group within two main categories: one, the top five reasons for requiring treatment for a health issue (illness or injury), and the top five reasons for preventative services when a health issue was not the immediate reason for the visit (for example, immunization or screening).

Highlights

Key findings of the report include:

Overview

- The annual cost of health centre services for the entire population averaged $18.6 million between 2001/02 and 2005/06 for 81,622 visits by 11,797 people. Approximately $14.8 million was spent on 65,648 visits by 10,920 patients with issues, and $3.8 million was spent on 15,974 visits by 6,325 patients without issues.
- Next to older adults (age 45 and over), infants had the highest repeat utilization of health centre services at 7.7 visits per year, at an average cost of $237 per visit.
- Children, age 1 to 4, averaged 5.3 visits per year, at an average cost of $206 per visit.
- Children, age 5 to 14, required the least amount of health centre services. The average number of visits per year was 4 and, the average cost per visit was $200.

- Utilization of health centres increased with all subsequent age groups:
    - youth (age 15 to 24) averaged 5.2 visits per year at an average cost of $240 per visit;
    - adults (age 25 to 44) averaged 6.1 visits per year at an average cost of $235 per visit;
    - older adults (age 45 to 64) averaged 8.1 visits per year at an average cost of $229 per visit; and
    - seniors (age 65 and over) the rate of visits per patient doubled to 16.3 per year at an average cost of $231 dollars per visit

Infants (Under 1)

- Health centre visits for infants averaged approximately $813,000 per year between 2001/02 and 2005/06. Just over half the cost, $426,000 was for 1,937 visits by 374 infants having 2,398 issues. The remaining costs were for 1,494 visits, without issues, by 376 infants who received 4,355 services.
- The top five diagnosed or suspected conditions were diseases of the respiratory system (42%), diseases of the nervous system and sense organs (20%), diseases of the digestive system (14%), diseases of the skin and subcutaneous tissues at (8%), and infectious and parasitic diseases (6%).
- The top five services were immunizations (31%), health education to caregivers (28%), screenings (26%), health assessments (7%), and counseling to caregivers (3%).

Children (1 to 4)

- Health centre visits for children, age 1 to 4 years, averaged approximately $1.2 million per year between 2001/02 and 2005/06. Approximately 70% of the cost, $820,000, was for 4,319 visits by 973 patients having 5,258 issues. The remaining costs were for 1,365 visits, without issues, by 711 patients who received 3,834 services.
- The top five diagnosed or suspected conditions were diseases of the respiratory system (34%), diseases of the nervous system and sense organs (20%), diseases of the digestive system at (11%), diseases of the skin and subcutaneous tissues at (11%), and injuries and poisonings (10%).
- The top five services were immunizations (29%), screenings (29%), health education (22%), health assessment (6%), and TB therapy (3%).

Children (5 to 14)

- Health centre visits for children, age 5 to 14 years, averaged approximately $1.8 million per year between 2001/02 and 2005/06. Approximately three-quarters of the cost, $1.4 million was for 6,808 visits by 2,108 patients having 7,768 issues. The remaining costs were for 2,438 visits, without issues, by 1,040 patients who received 3,385 services.

- The top five diagnosed or suspected conditions were diseases of the respiratory system (26%), injuries and poisonings (19%), diseases of the nervous system and sense organs (14%), skin diseases (12%) and infectious diseases (9%).
- The top five services by proportion of services were screenings (31%), immunizations (22%), TB therapy (21%), health education (7%), and exams (4%).

Youth (15 to 24)

- Health centre visits for youth, age 15 to 24 years, averaged approximately $2.5 million per year between 2001/02 and 2005/06. Approximately two-thirds of the cost, $1.7 million, was for 7,019 visits by 1,772 patients having 8,394 issues. The remaining costs were for 3,331 visits, without issues, by 1,108 patients who received 6,632 services.
- The top five diagnosed or suspected conditions were injuries and poisonings (21%), diseases of the respiratory system (14%), diseases of the genitourinary system (11%), diseases of the digestive system (10%), and diseases of the nervous system and sense organs (8%).
- The top five services were reproductive related (31%), screenings (26%), health education (10%), diagnostic services (6%), and TB therapy (6%).

Adults (25 to 44)

- Health centre visits for adults, age 25 to 44 years, averaged approximately $5.2 million per year between 2001/02 and 2005/06. Approximately 78% of the cost, $4 million, was for 17,397 visits by 3,323 patients having 20,816 issues. The remaining costs were for 4,659 visits, without issues, by 1,838 patients who received 9,313 services.
- The top five diagnosed or suspected conditions were injuries and poisonings (15%), diseases of the respiratory system (12%), diseases of the musculoskeletal system and connective tissue (12%), diseases of the digestive system (11%), and diseases of the genitourinary system (10%).
- The top five services were screenings (29%), reproductive services (25%), health education (9%), diagnostic services (8%), and immunizations (5%).

Adults (45 to 64)

- Health centre visits for adults, age 45 to 64 years, average approximately $3.9 million per year between 2001/02 and 2005/06. Approximately 90% of the cost, $3.5 million, was for 15,132 visits by 1,976 patients having 18,525 issues. The remaining costs were for 1,731 visits, without issues, by 986 patients who received 3,130 services.
- The top five diagnosed or suspected conditions were diseases of the musculoskeletal system and connective tissue (14%), diseases of the circulatory system (13%), endocrine, nutritional and metabolic disorders (11%), diseases of the respiratory system (10%) and diseases of the digestive system (10%).
- The top five services were screenings (30%), diagnostic services (16%), immunizations (13%), health education (10%), and administration and planning (7%).

Seniors (Age 65 and Over)

- Health centre visits for seniors, age 65 years and over, averaged approximately $3.2 million per year between 2001/02 and 2005/06. Approximately 94% of the cost, $3 million, was for 13,037 visits by 835 patients having 18,609 issues. The remaining costs were for 956 visits, without issues, by 484 patients who received 1,395 services.
- The top five diagnosed or suspected conditions were diseases of the circulatory system (24%), diseases of musculoskeletal system and connective tissue (16%), diseases of respiratory system (13%), diseases of the digestive system (11%), and endocrine, nutritional and metabolic disorders (9%).
- The top five services were screenings (20%), diagnostic services (19%), immunizations (18%), administration and planning (8%), and health education (7%).

Conclusion

- This report presents a detailed look at health centre utilization at the beginning of the 21st century. By examining utilization by age, this report shows not only that the intensity of health centre use changes with age, but also many of the reasons for the use of health centre services change with age. Moreover, many of the reasons for health centre use are preventable.

Chapter 1: Introduction

1.1 Background

Health centres are an important part of the NWT Health Care system. They are the first point of access of care for approximately 30% of the NWT population. The documentation of what occurs in these health centres is an important part of public accountability. This report fulfills part of that accountability by detailing the main reasons the public uses health centres.

The last report on health centre utilization by residents of the Northwest Territories was published in 2001. The NWT Health Services Report 2000 not only took a broad look at the utilization of health centre services but also examined the utilization of hospital and physician services. The two major findings of the report were: one, health service utilization is primarily determined by age; and two, that preventable conditions are responsible for a large proportion of health service utilization.

This report provides an updated analysis of the utilization of health centre services by Northwest Territories residents between 2001/02 and 2005/06.

1.2 New Reporting Format

This report is the second in a series of shorter more focused reports that provide greater detail on a single health service area, examining the use of services by age group and by condition. The first report in this series, Hospital Services Report, 2006, was released in 2007 – covering the time period 2000/01 to 2003/04. This report focuses on health centre services provided to residents of the Northwest Territories. The final report will focus on physician services.

1.3 Health Centre System

Nineteen community health centres provide the first level of emergency and treatment care, as well as prevention services, for approximately 30% of NWT residents (See Appendix C for a list of communities with a health centre). The communities with health centres do not have resident doctors, nor do they have hospitals. Nurses are the primary care providers for treatment and emergency services in each health centre. As well, nurses provide the primary role in prevention through immunizations, screening and other measures. As such, health centres, the nurses and other staff, are an integral part of the NWT health care system.

When patients require more advanced care they are referred to larger centres to see specialists and/or receive care in a hospital setting. Also, physicians and other health professionals travel periodically to these communities to provide care.

1.4 Scope of the Report

The reasons for health centre use will be examined in detail by the following age groups: Under 1, 1 to 4, 5 to 14, 15 to 24, 25 to 44, 45 to 64, and 65 and over. A chapter per age group will examine both the top five reasons for requiring treatment for a health issue (illness or injury), and the top five reasons for services when a health issue was not the reason for the visit (preventative measures, such as immunizations or screenings).[1]

The number of issues (illnesses or injuries) presented will be the primary measure of health centre service use for morbidity, while the number of services provided will be the primary measure for health centre activity when an issue was not involved. Patients can have more than one issue per visit and they can also receive more than one service per visit. Data on visits, and other measures, are presented as an overview.

Similar issues (e.g., cold and flu) are grouped into categories or chapters (e.g., diseases of the respiratory system) according to the International Classification of Diseases, 9th Revision (ICD-9).[2] The top five ICD-9 chapters, though differing across age groups, generally account for two-thirds of the health centre activity where the condition is known or suspected. Further detail is provided on the general conditions that account for the largest amount of issues seen. For example, where diseases of the respiratory system figure prominently, a breakdown of the proportion of issues for the particular respiratory diseases is provided, e.g., asthma and pneumonia.

There are two other chapters, within the ICD-9, that categorize the reasons why health centre services were provided when 1) the underlying problem is unknown - referred to as symptoms, signs and ill-defined conditions; or 2) where the reason for service is due to other identified factors related to health status, such as the patient being at risk due to behaviour, lifestyle or family history. These two chapters will be examined separately for each age group.

Community health codes are used to document services provided to the patients of health centres.[3] These codes have been grouped into categories, such as screenings, immunizations, counseling and other service categories. The top five groupings usually are responsible for two-thirds or more of the health centre services to patients without issues. Further detail is provided on the service categories that account for the largest amount of services provided. For example, where screening figures prominently, a breakdown of the services for the particular types of screenings is provided, e.g., tuberculosis, vision and hearing.

The time period examined is 2001/02 to 2005/06, with data presented in five-year averages. Five-year averages are used to allow for a greater degree of reliability when examining the particular reasons for health centre use.

This report does not breakdown costs by specific issue category but does provide overall cost analysis. Cost estimation methodology and limitations are presented in Appendix C.

[1] A visit to a health centre can involve both the treatment of an issue and the provision of public health services at the same time. Visits with both issues and public health occurring at the same time cannot be separated out within the context of this report (see Appendix C for more detail).

[2] For more detail on the ICD-9 chapters see Appendix C.

[3] For more detail on the community health code categories see Appendix C.

This report does not provide an analysis of health centre services by community type, ethnicity or gender. All health centres are located in small communities outside of Yellowknife and the regional centres. Similarly, all health centres are located in communities that are primarily aboriginal (Norman Wells is the exception).[4] While gender is a factor determining some reasons for health centre use (such as services pre and post childbirth, age 15 to 44), it is generally secondary to age as a determinant of the frequency of health centre utilization. Given this report is intended to follow through on the findings of the importance of age in the previous report on health centre services, The NWT Health Services Report 2000, this report focuses on age. However, some utilization breakdowns by gender are presented in Appendix B.

This report contains time-sensitive information. Such information is only accurate as of September 2006. The information in this report, may be updated, amended, supplemented or otherwise altered by subsequent reports and presentations.

All non-financial service information is from the NWT Department of Health and Social Services. All financial information in this report is from both the NWT Department of Health and Social Services and the Government of the Northwest Territories, Main Estimates. (See Appendix C for more detail on data sources and methodology).

1.5 Organization of the Report

Chapter 2 presents an overview of health centre activity.

Chapters 3 to 9 present an analysis of health centre activity by each age group:

Under 1, 1 to 4, 5 to 14, 15 to 24, 25 to 44, 45 to 64, and 65 & up.

Chapter 10 provides some concluding remarks.

Appendix A presents a glossary of terms used in the report.

Appendix B includes several tables of basic measures of health centre utilization.

Appendix C provides an overview of the methodology and data used throughout the report.

[4] Overall, the total population with a health centre was 87% aboriginal. Norman Wells was 35% aboriginal. NWT Bureau of Statistics, 2006 Community Population by Ethnicity. http://www.stats.gov.nt.ca/Statinfo/Demographics/population/popest.html

Chapter 2: Overview

The annual cost of health centre services for the entire population averaged $18.6 million between 2001/02 and 2005/06 for 81,622 visits by 11,797 people. Approximately $14.8 million was spent on 65,648 visits by 10,920 patients with issues, and $3.8 million was spent on 15,974 visits by 6,325 patients without issues.

Table 2.1 presents a set of utilization and cost measures of health centre activity for both patients with issues and those without. Generally, utilization is heaviest at a very young age and for those in the mid-forties onwards.

Table 2.1
Health Centre Activity - Various Metrics
2001/02 to 2005/06 Annual Average

	Total	Under 1	1 to 4	5 to 14	15 to 24	25 to 44	45 to 64	65 & Up
All Visits								
Visits Per Patient	6.9	7.7	5.3	4.0	5.2	6.1	8.1	16.3
Cost per Patient	$1,576	$1,823	$1,085	$792	$1,261	$1,443	$1,858	$3,755
Cost per Visit	$228	$237	$206	$200	$240	$235	$229	$231
Visits w/ Issues								
Visits Per Patient	6.0	5.2	4.4	3.2	4.0	5.2	7.7	15.6
Cost per Patient	$1,357	$1,138	$843	$651	$952	$1,212	$1,753	$3,616
Cost per Visit	$226	$220	$190	$202	$240	$231	$229	$232
Visits w/out Issues								
Visits Per Patient	2.5	4.0	1.9	2.3	3.0	2.5	1.8	2.0
Cost per Patient	$597	$1,031	$490	$459	$724	$626	$410	$430
Cost per Visit	$236	$259	$256	$196	$241	$247	$233	$218

Sources: NWT Department of Health and Social Services and NWT Financial Management Board Secretariat

While children generally use the least amount of health services, infants are an exception. Next to seniors and older adults, infants had the highest repeat utilization of health centre services at 7.7 visits per year. Approximately 56% of these visits were for the diagnosis or treatment of a health issue – the lowest proportion amongst all age groups. Most issues were respiratory system related (colds) or nervous system and sense organs related (ear infections). Infants had the highest number of visits without issues at 4 per patient per year. Public health services, such as immunizations, health education for their parents, and routine screening around the infant's development were the main services provided to infants when no issue was present.

Health centre utilization decreases dramatically as the child ages. Children, age 1 to 4, averaged 5.3 visits per year at an average cost of $206 per visit. Approximately three-quarters of these visits were issue-related. Respiratory system issues (colds) or nervous system and sense organs issues (ear infections) remained prominent. Public health activities including such services as immunization, health education for their parents and routine screening around the child's development remained prominent.

Children, age 5 to 14, require the least amount of health centre services. The average number of visits per year was 4 and, the average cost per visit was $200.

Issues requiring treatment and care become more balanced as the child ages, as does the types of public health services provided to 5 to 14 year olds.

Utilization of health centres increases in the next age group, youth (age 15 to 24), averaging 5.2 visits per year at an average cost of $240 per visit. Injuries rose in prominence for youth as a proportion of conditions treated, as did conditions related to the genitourinary system (urinary tract infections). Reproductive related services (pre and post-pregnancy care) begin to figure prominently in the area of public health services.

Health centre utilization continues to increase into the adult years (age 25 to 44) - with patients averaging 6.1 visits per year at an average cost of $235 per visit. Similar to youth, injuries figured prominently, as did conditions related to the genitourinary system (urinary tract infections) on the treatment side of the health centre system. Reproductive related services (pre and post-pregnancy care) continued to figure prominently in the area of public health services.

A big shift in the number of visits to health centres begins with older adults, age 45 to 64. These adults averaged 8.1 visits per year at an average cost of $229 per visit. Visits with issues make up approximately 90% of the total visits. Issues classified as diseases of musculoskeletal system and connective tissue (rheumatoid and osteoarthritis), circulatory issues (high blood pressure), and those classified as endocrine, nutritional and metabolic disease and immunity disorders (diabetes) rose to prominence. Visits without issues averaged 1.8 per year - the lowest of all age groups.

For seniors (age 65 and over), the rate of visits per patient doubled to 16.3 per year at an average cost $231 dollars per visit adding up to an average per patient cost of $3,755 - more than double the average for all ages. Approximately 93% of these visits involved the diagnosis or treatment of an issue. Circulatory issues (high blood pressure) and issues classified as diseases of musculoskeletal system and connective tissue (rheumatoid and osteoarthritis), figured prominently as reasons for health centre care.

Chapter 3: Infants (Under 1)

Health centre visits for infants averaged approximately $813,000 per year between 2001/02 and 2005/06. Just over half the cost, $426,000, was for visits with an issue (diagnosed or suspected condition), with the remaining costs for visits without issues.

3.1 Patients with Issues

On average, approximately 82% of unique patients, 83% of visits, and 83% of issues were for diagnosed conditions, with the remainder for ill-defined conditions and supplementary classifications.

Diagnosed Conditions

In terms of unique patient, visit, and issue measures of health centre activities, the top five conditions, as proportion of known or suspected conditions, were respiratory system related, sense organs and nervous system related, digestive system issues, skin diseases, and infectious diseases (see Table 3.1).

Table 3.1
Health Centre Activity for Under 1 by Top 5 Conditions
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (894)	Visits (1,909)	Services (1,980)
1	Respiratory System 29%	Respiratory System 41%	Respiratory System 42%
2	Sense Organs 19%	Sense Organs 20%	Sense Organs 20%
3	Digestive System 17%	Digestive System 14%	Digestive System 14%
4	Skin Diseases 10%	Skin Diseases 8%	Skin Diseases 8%
5	Infectious Diseases 9%	Infectious Diseases 6%	Infectious Diseases 6%
Other	16%	10%	10%

Source: NWT Health and Social Services

Respiratory diseases were responsible for 42% (826) of diagnosed issues. Acute and upper respiratory infections were responsible for 89% of the issues. Such infections primarily included the common cold but also included more serious issues such as acute bronchitis and bronchiolitis. The remaining respiratory related issues included diseases such as pneumonia, asthma and influenza.

Diseases related to the sense organs and nervous system accounted for 20% (387) of the issues treated at the health centre. Ear issues (primarily middle ear infections) were responsible for 87% of the issues. The remaining nervous system related issues were primarily made up of eye conditions such as pink eye (conjunctivitis).

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Other	16%	10%	10%

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Digestive systems diseases accounted for a further 14% (283) of issues treated at the health centres. Gastritis, gastroenteritis and other stomach and intestinal issues were responsible for approximately half of the digestive disease related issues. The remaining issues were primarily dental related (teething).

Diseases of the skin and subcutaneous tissues accounted for further 8% (165) of issues. Non-infectious skin rashes (eczema) made up of 53% of these issues and impetigo (infectious rashes) made up a further 14% of skin related issues. The remaining issues included a number of skin related issues.

Infectious diseases were responsible for 6% (118) of issues and were primarily made up of cases of candidiasis (yeast infections in the mouth and diaper rash).

Ill-Defined Conditions and Other factors Related to Health Status

Approximately 96% (403) of these issues were classified as symptoms, signs and ill-defined conditions, with the remaining issues (15) for other factors related to health status. Respiratory symptoms, fevers, and rashes were the main issues infants had treated under the category for symptoms, signs and ill-defined conditions. Issues under the category of other factors related to health status were almost exclusively parents expressing concern over their infant's health, though no condition or illness was found.

3.2 Patients without Issues

The cost of health centre services to infants without issues averaged $487,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services for infants without issues were immunizations, health education, screenings, health assessments, and counselling (see Table 3.2).

Table 3.2
Health Centre Activity for Under 1 by Top 5 Services (Non-Issues)
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (1,319)	Visits (2,867)	Services (4,355)
1	Immunization 27%	Immunization 35%	Immunization 31%
2	Screening 22%	Screening 23%	**Health Education 28%**
3	**Health Education 21%**	**Health Education 20%**	Screening 26%
4	Health Assessment 14%	Health Assessment 11%	Health Assessment 7%
5	Counseling 9%	Counseling 5%	Counseling 3%
Other	7%	5%	4%

Immunizations made up approximately 31% (1,365) of the services provided to infants without health issues. The majority of these infants received vaccines for diphtheria, tetanus, pertussis, poliovirus and haemophilus influenzae type b, as well as hepatitis B and tuberculosis.

Health education made up approximately 28% (1,210) of the services related to infants.[2] Over 41% of health education services provided to the parents of the infants were on the topics of nutrition, diet and dental health. A further 28% of health education involved the topic of infant growth and development. The remaining services, under health education, primarily included general parenting skills as well as tips in how to keep the home safe and prevent injuries to infants.

[1] For overall detail on immunizations, see Maria Santos, Immunization Coverage in the Northwest Territories, in Epiaktuk, Vol. 18, Issue 2, 2006, pp. 1, 3-6.

[2] While the service was provided to the parents of the infant, the service is documented as having been provided to the infant, given the consideration the infant was the reason for the parent's visit to the health centre.

3.2 Patients without Issues

The cost of health centre services to infants without issues averaged $387,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services for infants without issues, were immunizations, health education, screenings, health assessments, and counseling (see Table 3.2).

Table 3.2
Health Centre Activity for Under 1 by Top 5 Services (Non-Issues)
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (1,319)	Visits (2,867)	Services (4,355)
1	Immunization 27%	Immunization 35%	Immunization 31%
2	Screening 22%	Screening 23%	Health Education 28%
3	Health Education 21%	Health Education 20%	Screening 26%
4	Health Assessment 14%	Health Assessment 11%	Health Assessment 7%
5	Counseling 9%	Counseling 5%	Counseling 3%
Other	7%	5%	4%

Immunizations made up approximately 31% (1,365) of the services provided to infants without health issues. The majority of these infants received vaccines for diphtheria, tetanus, pertussis, poliovirus and haemophilus influenzae type b, as well as hepatitis B, and tuberculosis.[5]

Health education made up approximately 28% (1,210) of the services related to infants.[6] Over 41% of health education services provided to the parents of the infants were on the topics of nutrition, diet and dental health. A further 28% of health education involved the topic of infant growth and development. The remaining services, under health education, primarily included general parenting skills as well as tips in how to keep the home safe and prevent injuries to infants.

[5] For overall detail on immunizations, see Maria Santos, "Immunization Coverage in the Northwest Territories" in EpiNorth Vol. 18, Issue 2, 2006, pp. 1, 3-6.

[6] While the service was provided to the parents of the infant, the service is documented as having been provided to the infant given the existence of the infant was the reason for the parent's visit to the health centre.

Screening made up 26% (1,153) of the services provided per year. Approximately 55% of screening services were provided to track the development of the infant. Eye and vision exams made up a further 16% of screening services. Ear and hearing exams accounted for approximately 15% of screening tests. The remaining screening services primarily included hemoglobin tests - measuring a protein in red blood cells (low levels of hemoglobin are often due to iron deficiencies).

Health assessments made up 7% (325) of the services and primarily included general services whereby nurses review the infant's needs and then determine the appropriate services required such as immunizations, screening and health education for the parents.

Counseling made up 3% (147) of the services provided - and almost exclusively involved counseling to address parental stress.

Chapter 4: Children (1 to 4)

Health centre visits for children, age 1 to 4 years, averaged approximately 51.2 million per year between 2001/02 and 2005/06. Approximately 70% of the cost, $820,000, was for visits where an issue (diagnosed or suspected condition) was presented, with the remaining costs for visits where an issue was not presented.

4.1 Patients with Issues

On average, approximately 86% of unique patients, 88% of visits, and 88% of issues were for diagnosed conditions, with the remainder for ill-defined conditions and supplementary classifications.

Diagnosed Conditions

In terms of unique patient, visit, and issue measures of health centre activities, the top five conditions were: respiratory system related, sense organs and nervous system related, digestive system issues, skin diseases, and injuries and poisonings (see Table 4.1).

Table 4.1
Health Centre Activity for Age 1 to 4 by Top 5 Conditions
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (2,342)	Visits (4,442)	Services (4,615)
1	Respiratory System 26%	Respiratory System 33%	Respiratory System 34%
2	Sense Organs 19%	Sense Organs 20%	Sense Organs 20%
3	Digestive System 13%	Digestive System 11%	Digestive System 11%
4	Injury & Poisoning 12%	Skin Diseases 11%	Skin Diseases 11%
5	Skin Diseases 12%	Injury & Poisoning 11%	Injury & Poisoning 10%
Other	18%	14%	14%

Source: NWT Health and Social Services

Respiratory diseases were responsible for 34% (1,570) of diagnosed issues. Acute and upper respiratory infections were responsible for 85% of the issues. Such infections primarily included the common cold but also included more serious issues such as acute bronchitis and bronchiolitis, as well as tonsillitis. The remaining respiratory related issues included diseases such as asthma, pneumonia, and influenza.

Chapter 4: Children (1 to 4)

Health centre visits for children, age 1 to 4 years, averaged approximately $1.2 million per year between 2001/02 and 2005/06. Approximately 70% of the cost, $820,000, was for visits where an issue (diagnosed or suspected condition) was presented, with the remaining costs for visits where an issue was not presented.

4.1 Patients with Issues

On average, approximately 86% of unique patients, 88% of visits, and 88% of issues were for diagnosed conditions, with the remainder for ill-defined conditions and supplementary classifications.

Diagnosed Conditions

In terms of unique patient, visit, and issue measures of health centre activities, the top five conditions were: respiratory system related, sense organs and nervous system related, digestive system issues, skin diseases, and injuries and poisonings (see Table 4.1).

Table 4.1
Health Centre Activity for Age 1 to 4 by Top 5 Conditions
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	Unique Patients (2,342)	Visits (4,442)	Services (4,615)
1	Respiratory System 26%	Respiratory System 33%	Respiratory System 34%
2	Sense Organs 19%	Sense Organs 20%	Sense Organs 20%
3	Digestive System 13%	Digestive System 11%	Digestive System 11%
4	Injury & Poisoning 12%	Skin Diseases 11%	Skin Diseases 11%
5	Skin Diseases 12%	Injury & Poisoning 11%	Injury & Poisoning 10%
Other	18%	14%	14%

Source: NWT Health and Social Services.

Respiratory diseases were responsible for 34% (1,570) of diagnosed issues. Accute and upper respiratory infections were responsible for 85% of the issues. Such infections primarily included the common cold but also included more serious issues such as acute bronchitis and bronchiolitis, as well as tonsillitis. The remaining respiratory related issues included diseases such as asthma, pneumonia, and influenza.

Diseases related to the sense organs and nervous system accounted for 20% (922) of the issues treated at the health centre. Ear issues (primarily middle ear infections) were responsible for 88% of the issues. The remaining nervous system related issues were primarily made up of eye conditions such as pink eye (conjunctivitis).

Digestive system diseases accounted for 11% (511) of issues treated at the health centres. Dental issues (cavities, infected teeth and teething) and soft tissue inflammation of the mouth area (stomatitis) were responsible for 56% of the digestive system issues. Gastritis, gastroenteritis and other stomach and intestinal issues (diarrhea) were responsible for approximately 41% of the issues.

Diseases of the skin and subcutaneous tissues accounted for further 11% (504) of issues. Non-infectious skin rashes (eczema) made up of 40% of these issues. Impetigo (infectious rashes) made up a further 28% of skin related issues. The remaining issues included a number of issues, including cellulitis and abscesses.

Injuries and poisonings were responsible for 10% (480) of diagnosed issues, and primarily involved minor cuts, burns, and bruising to multiple sites on the body.

Ill-Defined Conditions and Other factors Related to Health Status

Approximately 95% (611) of these issues were classified as symptoms, signs and ill-defined conditions, with the remaining issues (31) being other factors related to health status. Respiratory symptoms, fevers, and rashes were the main issues children had been treated under the category for symptoms, signs and ill-defined conditions. Issues under the category of other factors primarily involved the assessment of the child after potential contact with tuberculosis as well as parents expressing concern over their child's health, though no condition or illness was found.

Fort Resolution Nursing Station

4.2 Patients without Issues

The cost of health centre services to children without issues averaged $349,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services for children 1 to 4 without issues were: immunizations, screenings, health education, health assessments, tuberculosis (TB) therapy (visits and issues) and exams (unique patients). (see Table 4.2).

Table 4.2
Health Centre Activity for Age 1 to 4 by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (1,839)	Visits (2,503)	Services (3,834)
1	Immunization 29%	Immunization 30%	Immunization 29%
2	Screening 25%	Screening 25%	Screening 29%
3	Health Education 19%	Health Education 17%	Health Education 22%
4	Health Assessment 10%	Health Assessment 8%	Health Assessment 6%
5	Exam 6%	TB Therapy 5%	TB Therapy 3%
Other	13%	14%	10%

Note: Only includes services for non-issue patient visits.
Source: NWT Health and Social Services.

Immunizations made up approximately 29% (1,131) of the services provided to children without health issues. The majority of these children received vaccinations (general in vaccine combinations) for the following diseases: measles, mumps, and rubella; diphtheria, tetanus, pertussis, poliovirus and haemophilus influenzae type b; as well as vaccines for meningococcal type C and chickenpox (varicella).

Screening made up 29% (1,119) of the services provided per year. Approximately 42% of screening services were provided to track the development of the child. Hemoglobin tests made up a further 20% of screening services. Eye and vision exams, plus ear and hearing exams made up a further 13% of screening services. The remaining tests were scattered across a number of categories, including head lice checks and speech assessments.

Health education to parents made up 22% (860) of the services. Education on nutrition, diet and dental health were responsible for more than half these services. Education on child growth and development accounted for a further quarter of these services. The remaining education services primarily focused on injury prevention and general parenting skills.

4.2 Patients without Issues

The cost of health centre services to children without issues averaged $349,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services for children 1 to 4 without issues were: immunizations, screenings, health education, health assessments, tuberculosis (TB) therapy (visits and issues) and exams (unique patients) (see Table 4.2).

Table 4.2
Health Centre Activity for Age 1 to 4 by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (1,839)	Visits (2,503)	Services (3,834)
1	Immunization 29%	Immunization 30%	Immunization 29%
2	Screening 25%	Screening 25%	Screening 29%
3	Health Education 19%	Health Education 17%	Health Education 22%
4	Health Assessment 10%	Health Assessment 8%	Health Assessment 6%
5	Exam 6%	TB Therapy 5%	TB Therapy 3%
Other	13%	14%	10%

Note: Only includes services for non-issue patient visits.
Source: NWT Health and Social Services.

Immunizations made up approximately 29% (1,131) of the services provided to children without health issues. The majority of these children received vaccinations (general in vaccine combinations) for the following diseases: measles, mumps, and rubella; diphtheria, tetanus, pertussis, poliovirus and haemophilus influenzae type b; as well as vaccines for meningococcal type C and chickenpox (varicella).

Screening made up 29% (1,119) of the services provided per year. Approximately 42% of screening services were provided to track the development of the child. Hemoglobin tests made up a further 20% of screening services. Eye and vision exams, plus ear and hearing exams made up a further 13% of screening services. The remaining tests were scattered across a number of categories, including head lice checks and speech assessments.

Health education to parents made up 22% (860) of the services. Education on nutrition, diet and dental health were responsible for more than half these services. Education on child growth and development accounted for a further quarter of these services. The remaining education services primarily focused on injury prevention and general parenting skills.

Health assessments made up 6% (214) of the services and primarily included general services whereby nurses review the child's needs and then determine the appropriate services required such as immunizations, screening and health education for the parents.

Tuberculosis (TB) therapy made up 3% (133) of the services provided. TB therapy includes the treatment of those with either active or inactive TB (latent TB).[7] Therapy requires the patient to visit several times over the course of treatment, thus resulting in a large number of services for just a handful of patients.

Aklavik Nursing Station

[7] Treatment involves a nurse or other staff member observing the patient taking their medication.

Chapter 5: Children (5 to 14)

Health centre visits for children, age 5 to 14 years, averaged approximately $1.8 million per year between 2001/02 and 2005/06. Approximately three-quarters of the cost, $1.4 million, was for visits where an issue (diagnosed or suspected condition) existed, with the remaining costs for visits by patients without an issue.

5.1 Patients with Issues

On average, approximately 87% of unique patients, 89% of visits, and 89% of issues were for diagnosed conditions, with the remainder for ill-defined conditions and supplementary classifications.

Diagnosed Conditions

In terms of unique patient, visit, and issue measures of health centre activities, the top five conditions were: respiratory system related, injuries and poisonings, sense organs and nervous system related, skin diseases, and infectious diseases (see Table 5.1).

Table 5.1
Health Centre Activity for for Age 5 to 14 by Top 5 Conditions
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (4,035)	Visits (6,645)	Issues (6,897)
1	Respiratory System 24%	Respiratory System 26%	Respiratory System 26%
2	Injury & Poisoning 18%	Injury & Poisoning 19%	Injury & Poisoning 19%
3	Sense Organs 14%	Sense Organs 14%	Sense Organs 14%
4	Skin Diseases 11%	Skin Diseases 12%	Skin Diseases 12%
5	Infectious Diseases 10%	Infectious Diseases 10%	Infectious Diseases 9%
Other	23%	21%	20%

Source: NWT Health and Social Services.

Respiratory diseases were responsible for 26% (1,808) of diagnosed issues. Acute and upper respiratory infections were responsible for 83% of the issues. Such infections primarily included the common cold but also included more serious issues such as acute bronchitis and bronchiolitis, as well as tonsillitis. The remaining respiratory related issues included diseases such as asthma and influenza.

Injuries and poisonings made up 19% (1,285) of the issues treated at health centres. Open wounds (cuts and punctures) accounted for 32% of these issues. Sprains and minor fractures, primarily to the arms and legs made up another 24% of the issues. The remaining issues consisted of a large number of injury types, but primarily included lacerations/contusions and allergic reactions.

Diseases related to the sense organs and nervous system accounted for 14% (934) of the issues treated at health centres. Ear issues (primarily middle ear infections) were responsible for 77% of the issues. The remaining nervous system related issues were primarily made up of eye conditions, such as pink eye (conjunctivitis).

Diseases of the skin and subcutaneous tissues accounted for further 12% (813) of issues. Non-infectious skin rashes (such as eczema) made up of 43% of these issues. Impetigo (infectious rashes) made up a further 20% of skin related issues. The remaining issues included a number of issues, including cellulitis and abscesses.

Infectious and parasitic diseases accounted for 9% (644) of the issues treated at the health centres. Head lice (pediculosis) and mites (acariasis) were responsible for almost a third of the issues treated. Treatment for warts accounted for a further 19%, strep throat 17%, and tuberculosis 12%. The remaining issues included a number of different issues, including chicken pox, worms, and yeast infections.

Ill-Defined Conditions and Other factors Related to Health Status

Approximately 90% (789) of these issues were classified as symptoms, signs and ill-defined conditions, with the remaining issues (82) being supplementary classifications. Respiratory symptoms (cough, difficulty breathing), abdominal pain, and fevers were the main issues children had treated under the category for symptoms, signs and ill-defined conditions. Issues under the category of supplementary classification primarily involved the assessment of the child after potential contact with tuberculosis, the patient being at risk due to substance abuse/lifestyle (alcohol and drugs, tobacco use, high risk sexual behaviour) as well as parents/patients expressing concern over their child's health, though no condition or illness was found.

Behchokǫ̀ Health Centre

5.2 Patients without Issues

The cost of health centre services to children, age 5 to 14 years, without issues averaged $477,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services for children 5 to 14 without issues were: screenings, immunizations, tuberculosis (TB) therapy (visits and issues), health education, health assessments (unique patients), and exams (see Table 5.2).

Table 5.2
Health Centre Activity for Age 5 to 14 by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (1,791)	Visits (3,008)	Services (3,385)
1	Immunization 30%	Screening 28%	Screening 31%
2	Screening 30%	Immunization 23%	Immunization 22%
3	Health Education 7%	TB Therapy 22%	TB Therapy 21%
4	Exam 6%	Health Education 5%	Health Education 7%
5	Health Assessment 6%	Exam 4%	Exam 4%
Other	21%	17%	16%

Note: Only includes services for non-issue patient visits.
Source: NWT Health and Social Services.

Screening made up 31% (1,045) of the services provided per year. Approximately 55% of screening services were provided to test for tuberculosis. Vision and hearing tests made up a further 20% of screening services. The remaining tests were scattered across a number of categories, including head lice checks, development and speech assessments.

Immunizations accounted for 22% (752) of the services provided to children without health issues. Just over half these services were for Hepatitis B vaccinations. Boosters for diphtheria, tetanus, pertussis, poliovirus and haemophilus influenzae type B accounted for a further 22% of services. The remaining vaccinations primarily included those against influenza and meningococcal type C.

TB therapy accounted for 21% (697) of the services. TB therapy – primarily the observation of the patient taking their medication – is intensive, resulting in a large number of encounters for each patient. Moreover, people receiving medication do not necessarily have to be ill from the disease but could be deemed a candidate for treatment due to exposure to the disease, or because they carry a form of the disease referred to as latent TB.

Health education to both children and parents made up 7% (224) of the services. Education on communicable diseases, sexually transmitted diseases, birth control and general education around sexuality accounted for a quarter of these services. Education on nutrition, diet and dental health were responsible for almost another quarter of these services. The remaining education services primarily focused on general parenting and self-care skills.

Exams accounted for 4% (122) of services, and generally included pre-school and kindergarten pre-entry exams and pre-operative exams.

Chapter 6: Youth (15 to 24)

Health centre visits for youth, age 15 to 24 years, averaged approximately $2.5 million per year between 2001/02 and 2005/06. Approximately two-thirds of the cost, $1.7 million, was for visits with issues (diagnosed or suspected condition), with the remaining costs for visits without issues.

6.1 Patients with Issues

On average, approximately 83% of unique patients, 85% of visits, and 83% of issues were for diagnosed conditions, with the remainder for ill-defined conditions and supplementary classifications.

Diagnosed Conditions

In terms of unique patient, visit, and issue measures of health centre activities, the top five conditions were: injuries and poisonings, respiratory system related, diseases of the genitourinary system, digestive system related, and sense organs and nervous system related (see Table 6.1).

Table 6.1
Health Centre Activity for Age 15 to 24 by Top 5 Conditions
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (3,722)	Visits (6,608)	Issues (7,007)
1	Injury & Poisoning 20%	Injury & Poisoning 21%	Injury & Poisoning 21%
2	Respiratory System 15%	Respiratory System 14%	Respiratory System 14%
3	Genitourinary System 11%	Genitourinary System 11%	Genitourinary System 11%
4	Digestive System 10%	Digestive System 10%	Digestive System 10%
5	Sense Organs 8%	Sense Organs 8%	Sense Organs 8%
Other	35%	36%	37%

Source: NWT Health and Social Services.

Injuries and poisonings accounted for 21% (1,439) of the issues treated at the health centres. Open wounds (cuts and punctures) accounted for 29% of these issues. Sprains and minor fractures, primarily to the arms and legs made up another 27% of the issues. The remaining issues consisted of a large number of injury types, but primarily included lacerations/contusions and allergic reactions.

Diseases of the respiratory system made up 14% (957) of the issues treated. Acute and upper respiratory infections (colds, sore throats, tonsillitis) were responsible for 80% of the respiratory issues. The remaining issues primarily included asthma and influenza.

Diseases of the genitourinary system were responsible for 11% (772) of issues. Women experienced the majority of these issues, which primarily included such things as urinary tract infections, inflammation of female pelvic organs (cervix, vagina etc), and menstrual issues (absence of, infrequent, excessive menstruation etc).*

Digestive diseases were responsible for a further 10% (689) of the issues seen at health centres. Dental issues (cavities and infected teeth) were responsible for 57% of these issues. Stomach and intestinal disorders accounted for 23% of issues. The remaining issues were spread across a number of issues including, gallbladder issues, acid reflux (excessive heart burn), and appendicitis.

Sense organs and nervous system diseases were responsible for 8% (559) of the issues. Ear conditions, primarily infections, accounted for 43% of nervous system issues. Epilepsy accounted for 26% and eye problems such as pink eye (conjunctivitis) accounted for a further 21% of issues.

Ill-Defined Conditions and Other factors Related to Health Status

Just over half (712) of these issues were classified as symptoms, signs and ill-defined conditions, with the remaining issues (675) for other factors related to health status. Abdominal pain, respiratory symptoms (cough, difficulty breathing), tiredness and rashes were the main issues youth had treated under the category for symptoms, signs and ill-defined conditions. Issues under the category of other factors primarily involved, the patient being at risk due to substance abuse/lifestyle (tobacco use, alcohol and drugs, high risk sexual behaviour) and the assessment of the patient after a potential contact with a sexually transmitted infection.

* It is possible that some of these infections, upon a subsequent health centre visit and investigation, were diagnosed as a sexually transmitted infection.

6.2 Patients without Issues

The cost of health centre services to youth without issues averaged $802,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services for youth without issues were: reproductive services, screenings, health education, diagnostic services, tuberculosis (TB) therapy (visits and issues), and immunizations for unique patients (see Table 6.2).

Table 6.2
Health Centre Activity for for Age 5 to 24 by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (2,887)	Visits (5,051)	Services (6,632)
1	Screening 21%	Reproductive Services 29%	Reproductive Services 31%
2	Reproductive Services 17%	Screening 21%	Screening 26%
3	Health Education 13%	Health Education 10%	Health Education 10%
4	Diagnostic Services 9%	Diagnostic Services 7%	Diagnostic Services 6%
5	Immunization 8%	TB Therapy 7%	TB Therapy 6%
Other	32%	26%	21%

Note: Only includes services for non-patient visits.
Source: NWT Health and Social Services.

Reproductive services made up 31% (2,080) of the total services to youth. Prenatal (before delivery) care (assessment, counseling and education) accounted for 45% of the reproductive services. Birth control (dispensing, and monitoring the use) accounted for a third of services provided, pregnancy tests for 12% and the remaining services were related to post partum care.

Screening made up 26% (1,725) of the services to youth. Tests for tuberculosis and sexually transmitted infections each made up 18% of screenings. Hemoglobin tests accounted for 17% of screenings. Pap smears and blood pressure tests accounted for 13% and 9%, respectively. The remaining services covered a wide range of screenings, but primarily included pelvic and breast examinations.

Health education made up 10% (663) of the services. Education on communicable diseases (primarily sexually transmitted infections) accounted for 29% of services. Birth control and sexuality education made up 24% and self- care education a further 15% of services. The remaining education covered a wide range of topics, but primarily included pap smears and breast self-exams.

Diagnostic services, primarily blood tests, urinalysis and X-rays, made up 6% (395) and tuberculosis therapy accounted for a further 6% (380) of services.

Chapter 7: Adults (Age 25 to 44 Years)

Health centre visits for adults, age 25 to 44 years, averaged approximately $5.2 million per year between 2001/02 and 2005/06. Approximately 78% of the cost, $4 million was for visits with issues (diagnosed or suspected condition), with the remaining costs for visits without issues.

7.1 Patients with Issues

On average, approximately 84% of unique patients, 86% of visits, and 85% of issues were for diagnosed conditions, with the remainder for ill-defined conditions and supplementary classifications.

Diagnosed Conditions

In terms of unique patient, visit, and issue measures of health centre activities, the top five conditions were: injuries and poisonings, respiratory system related, diseases of the musculoskeletal system, digestive system related, and diseases of the genitourinary system (see Table 7.1).

Table 7.1
Health Centre Activity for for Age 25 to 44 by Top 5 Conditions
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (8,165)	Visits (16,871)	Services (17,706)
1	Injury & Poisoning 16%	Injury & Poisoning 14%	Injury & Poisoning 15%
2	Respiratory System 12%	Respiratory System 12%	Respiratory System 12%
3	Musculoskeletal System 12%	Musculoskeletal System 12%	Musculoskeletal System 12%
4	Digestive System 11%	Digestive System 11%	Digestive System 11%
5	Genitourinary System 10%	Genitourinary System 10%	Genitourinary System 10%
Other	37%	40%	40%

Source: NWT Health and Social Services

Injuries and poisonings accounted for 15% (2,571) of the issues treated at the health centres. Sprains and minor fractures, primarily to the arms and legs, accounted for 29% of these issues. Open wounds (cuts and punctures) made up another 27% of the issues. The remaining issues consisted of a large number of injury types, but primarily included lacerations/contusions and allergic reactions.

Diseases of the respiratory system made up 12% (2,163) of the issues treated. Acut and upper respiratory infections (colds, sore throats, sinus infections) were responsible for more than three-quarters of the respiratory issues. Asthmas accounted for about 10% of respiratory issues, and the remaining issues primarily included influenza and pneumonia.

Musculoskeletal system and connective tissue diseases were responsible for further 12% (2,108) of issues treated at health centres. Various forms of rheumatism (including rheumatoid arthritis) and joint pain were responsible for 70% of the issues. Back disorders accounted for most of the remaining musculoskeletal issues.

Diseases of the digestive system accounted for 11% (1,967) of issues. Stomach and intestinal diseases, primarily including such conditions as acid reflux, gastritis, gastroenteritis/colitis, accounted for over half of the digestive issues. Dental issues accounted for 35% of the digestive system issues. The remaining issues were spread across a number of conditions, including such problems as gallstones and hernias.

Diseases of the genitourinary system made up 10% (1,771) of the issues. Women experienced the vast majority of these issues, which primarily included such things as urinary tract infections, inflammation of female pelvic organs (cervix, vagina etc), and menstrual issues (absence of, infrequent, excessive menstruation etc).

Ill-Defined Conditions and Other factors Related to Health Status

Just over two-thirds (2,112) of these issues were classified as symptoms, signs and ill-defined conditions, with the remaining issues (999) for other factors related to health status. Abdominal pain, respiratory symptoms (chest pain, difficulty breathing), tiredness/sleep issues, and headaches were the main issues adults had been treated under the category for symptoms, signs and ill-defined conditions. Issues under the category of other factors primarily involved, the patient being at risk due to substance abuse/lifestyle (tobacco use, alcohol and drugs, lack of physical exercise and inappropriate diet) and the assessment of the patient after a potential contact with a communicable disease (primarily a sexually transmitted infection).

7.2 Patients without Issues

The cost of health centre services to adults, age 25 to 44 years, without issues averaged $1,150,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services for youth without issues were: screenings; reproductive services; health education; diagnostic services; and immunizations (see Table 7.2).

Table 7.2
Health Centre Activity for 25 to 44 by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (4,415)	Visits (6,996)	Services (9,313)
1	Screening 20%	Reproductive Services 25%	Screening 29%
2	Reproductive Services 12%	Screening 20%	Reproductive Services 25%
3	Diagnostic Services 12%	Diagnostic Services 10%	Health Education 9%
4	Health Education 12%	Health Education 9%	Diagnostic Services 8%
5	Immunization 9%	Immunization 6%	Immunization 5%
Other	35%	29%	23%

Note: Only includes services for non-issue patient visits.
Source: NWT Health and Social Services.

Screenings accounted for 29% (2,730) of the services provided to adults without issues. Hemoglobin tests accounted for 16% of screening services. TB tests accounted for 14% of services. Pap smears, screenings for sexually transmitted infections and blood pressure tests each accounted for 13% of screening services. The remaining services covered a wide range of screenings, including eye/vision and ear/hearing tests.

Reproductive services accounted for 25% (2,366) of services. Prenatal assessments and counseling accounted for over 45% of the reproductive services. Birth control dispensing/prescribing and monitoring/managing accounted for 36% of the services. Pregnancy tests, and postpartum care and education accounted for the remainder of reproductive services, at 10% and 9%, respectively.

7.2 Patients without Issues

The cost of health centre services to adults, age 25 to 44 years, without issues averaged $1,150,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services for youth without issues were: screenings, reproductive services, health education, diagnostic services and immunizations (see Table 7.2).

Table 7.2

Health Centre Activity for 25 to 44 by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (4,415)	Visits (6,996)	Services (9,313)
1	**Screening 20%**	Reproductive Services 25%	**Screening 29%**
2	Reproductive Services 12%	**Screening 20%**	Reproductive Services 25%
3	Diagnostic Services 12%	Diagnostic Services 10%	**Health Education 9%**
4	**Health Education 12%**	**Health Education 9%**	Diagnostic Services 8%
5	**Immunization 9%**	**Immunization 6%**	**Immunization 5%**
Other	35%	29%	23%

Note: Only includes services for non-issue patient visits.
Source: NWT Health and Social Services.

Screenings accounted for 29% (2,730) of the services provided to adults without issues. Hemoglobin tests accounted for 16% of screening services. TB tests accounted for 14% of services. Pap smears, screenings for sexually transmitted infections and blood pressure tests each accounted for 13% of screening services. The remaining services covered a wide range of screenings, including eye/vision and ear/hearing tests.

Reproductive services accounted for 25% (2,366) of services. Prenatal assessments and counseling accounted for over 45% of the reproductive services. Birth control dispensing/prescribing and monitoring/managing accounted for 36% of the services. Pregnancy tests, and postpartum care and education accounted for the remainder of reproductive services, at 10% and 9%, respectively.

Health education accounted for 9% (854) of services. Education around communicable diseases and breast self-examination each accounted for 19% of services. Self-care and pap smears each accounted for 18% of services, and birth control education accounted for 15% of services. The remaining education services covered a wide range of health-related topics.

Diagnostic services accounted for 8% (739) of services. Tests (X-rays, urinalysis, blood) for any number of unspecified conditions accounted for 63% of services. TB tests accounted for 25% of services, with the remaining diagnostic services covering a wide range of diseases.

Immunizations made up 5% (493) of services. Flu shots accounted for 56% of the immunization services, with the remaining immunizations primarily against hepatitis B, as well as tetanus and diphtheria.

Chapter 8: Adults (Age 45 to 64 Years)

Health centre visits for adults, age 45 to 64 years, averaged approximately $3.9 million per year between 2001/02 and 2005/06. Approximately 90% of the cost, $3.5 million was for visits with issues (diagnosed or suspected condition), with the remaining costs for visits for patient without issues.

8.1 Patients with Issues

On average, approximately 85% of unique patients, 89% of visits, and 89% of issues were for diagnosed conditions, with the remainder for ill-defined conditions and supplementary classifications.

Diagnosed Conditions

In terms of unique patient, visit, and issue measures of health centre activities, the top five conditions were: diseases of the musculoskeletal system, diseases of the circulatory system (visits and issues), endocrine, nutritional, and metabolic disorders (visits and issues), respiratory system related, digestive system related. Injuries and poisonings, and nervous system issues were in the top five for unique patients (see Table 8.1).

Table 8.1
Health Centre Activity for 45 to 64 by Top 5 Conditions
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (5,682)	Visits (15,738)	Services (16,395)
1	Musculoskeletal System 13%	Musculoskeletal System 14%	Musculoskeletal System 14%
2	Respiratory System 13%	Circulatory System 13%	Circulatory System 13%
3	Injury & Poisoning 12%	Endocrine, Nutritional & Metabolic 11%	Endocrine, Nutritional & Metabolic 11%
4	Digestive System 11%	Respiratory System 10%	Respiratory System 10%
5	Nervous System 9%	Digestive System 10%	Digestive System 10%
Other	42%	42%	41%

Source: NWT Health and Social Services.

Musculoskeletal system and connective tissue diseases were responsible for 14% (2,340) of issues treated at health centres. Various forms of joint and soft tissue disorders (rheumatoid arthritis and osteoarthritis) were responsible for 75% of the issues. Back disorders accounted for most of the remaining musculoskeletal issues.

Diseases of the circulatory system were responsible for approximately 13% (2,170) of issues treated. Hypertension (high blood pressure) was responsible for 63% of the circulatory system issues. Dysrhythmias (irregular heartbeats) accounted for 10% of issues. A number of different conditions accounted for the remaining issues, including stroke, heart attacks and hemorrhoids.

Endocrine, nutritional and metabolic disorders accounted for 11% (1,754) of the issues treated. The treatment of diabetes accounted for over half of these issues.

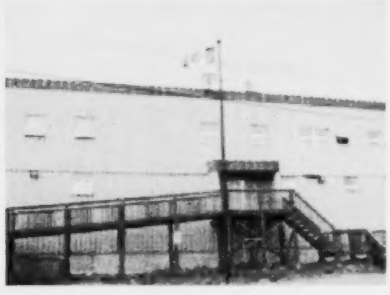
Hypothyroidism (under active thyroid gland) and lipoid metabolism disorders (problems metabolizing fatty acids) each made up 18% of issues. A number of other conditions made up the remaining issues treated.

Diseases of the respiratory system made up 10% (1,715) of the issues. Accute and upper respiratory infections, such as colds, throat infections, and sinus infections, made up 64% of the issues treated. Asthma accounted for another 10% of issues, while pneumonia and influenza accounted for the majority of the remaining respiratory issues.

Diseases of the digestive system accounted for a further 10% (1,630) of issues. Stomach conditions, primarily gastritis and acid reflux, made up 46% of digestive issues treated. Intestinal complaints (including gastroenteritis and colitis) accounted for another 23% of issues. Dental conditions, primarily cavities, accounted for another 20% of issues treated.

Ill-defined Conditions and Other factors related to Health Status

Just over 80% (1,726) of these issues were classified as symptoms, signs and ill-defined conditions, with the remaining issues (403) for other factors related to health status. Respiratory symptoms (chest pain, difficulty breathing), abdominal pain, tiredness/sleep issues, and headaches were the main issues adults had treated under the category for symptoms, signs and ill-defined conditions. Issues under the category of other factors primarily involved the patient being at risk due to substance abuse/lifestyle (tobacco use, lack of physical exercise and inappropriate diet) and the patient being at risk due to weight issues.



Lutselk'e Health Centre

Table 8.2
Health Centre Activity for 45 to 64 by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (2,000)	Visits (2,451)	Services (3,130)
1	Diagnostic Services 19%	Diagnostic Services 19%	Screening 30%
2	Screening 17%	Screening 18%	Diagnostic Services 16%
3	Immunization 16%	Immunization 15%	Immunization 13%
4	Health Education 10%	Health Education 9%	Health Education 10%
5	Nervous System 9%	Nervous System 8%	Administration & Planning 7%
Other	30%	31%	25%

Source: NWT Health and Social Services

8.2 Patients without Issues

The cost of health centre services to adults, age 45 to 64 years, without issues averaged $404,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services, for adults age 45 to 64, without issues were: screenings, diagnostic services, immunizations, health education, health assessment (unique patients and visits) and administration and planning (services) (see Table 8.2).

Table 8.2
Health Centre Activity for 45 to 64 by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (2,000)	Visits (2,451)	Services (3,130)
1	Diagnostic Services 19%	Diagnostic Services 19%	Screening 30%
2	Screening 17%	Screening 18%	Diagnostic Services 16%
3	Immunization 16%	Immunization 15%	Immunization 13%
4	Health Education 10%	Health Education 9%	Health Education 10%
5	Nervous System 9%	Nervous System 8%	Administration & Planning 7%
Other	30%	31%	25%

Source: NWT Health and Social Services.

Screenings accounted for 30% (944) of the services provided at the health centres. Blood pressure tests accounted for 18% of services. Pap smears accounted for 12% of services. TB and hemoglobin tests each made up 11% of services. Pelvic exams and STI screenings accounted for a further 9% of each of services. The remaining screenings services covered a wide range of conditions, including breast exams, eye and hearing exams.

Diagnostic services made up 16% (495) of services delivered. Approximately 46% these services were for conditions not specified, and included blood tests, urinalysis and X-rays. Another 40% of services were for tests for TB.

Immunizations accounted for 13% (401) of services. Flu shots accounted for 69% of immunization services, with the remaining immunizations primarily against hepatitis B, as well as tetanus and diphtheria.

Health education accounted for 10% (302) of services. Instruction around breast self-examination and self-care, each made up 23% of the education services. Education around pap smears and communicable diseases, accounted for 20% and 17%, respectively. The remaining health education covered a wide range of topics.

Administration and planning accounted for 7% (214) of services. Administration and planning centred almost exclusively on planning patient care (case management, correspondence, scheduling appointments etc)

Norman Wells Health Centre

Chapter 9: Seniors (Age 65 and Over)

Health centre visits for seniors, age 65 and over, averaged approximately $3.2 million per year between 2001/02 and 2005/06. Approximately 94% of the cost, $3 million, was for visits where an issue (diagnosed or suspected condition) was presented, with the remaining costs for visits where an issue was not presented.

9.1 Patients with Issues

On average, approximately 85% of unique patients, 91% of visits and 91% of issues were for diagnosed conditions, with the remainder for ill-defined conditions and supplementary classifications.

Diagnosed Conditions

In terms of unique patient, visit, and issue measures of health centre activities, the top five conditions were: diseases of the circulatory system, diseases of the musculoskeletal system, respiratory system related, digestive system related, and endocrine, nutritional, and metabolic disorders (visits and issues). Injuries and poisonings were in the top five for unique patients (see Table 9.1).

Table 9.1
Health Centre Activity for 65 & up by Top 5 Conditions
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (3,240)	Visits (15,791)	Services (16,866)
1	Musculoskeletal System 15%	Circulatory System 22%	Circulatory System 24%
2	Respiratory System 13%	Musculoskeletal System 16%	Musculoskeletal System 16%
3	Circulatory System 12%	Respiratory System 13%	Respiratory System 13%
4	Digestive System 12%	Digestive System 11%	Digestive System 11%
5	Injury & Poisoning 8%	Endocrine, Nutritional & Metabolic 9%	Endocrine, Nutritional & Metabolic 9%
Other	39%	28%	27%

Source: NWT Health and Social Services.

Diseases of the circulatory system made up 24% (4,078) of the issues treated at health centres. Of the circulatory issues, 52% were for hypertension (high blood pressure). Approximately, 15% were for the treatment of dysrhythmias (irregular heart beats). The remaining circulatory issues consisted of a number of conditions, including stroke, heart failure and angina (chest pain due to insufficient blood supply to the heart).

Musculoskeletal and connective tissue disorders accounted for 16% (2,749) of the issues treated.

Various forms of joint and soft tissue disorders, primarily including rheumatoid arthritis and osteoarthritis, were responsible for 74% of the issues. Osteoporosis and back disorders accounted for most of the remaining musculoskeletal issues.

Diseases of the respiratory system made up 13% (2,175) of the issues. Chronic obstructive pulmonary diseases (COPD) made up 55% of the respiratory issues. COPD includes such conditions as chronic bronchitis and asthma. Accute and upper respiratory infections, such as colds, throat infections and sinus infections, made up 28% of the issues treated. Pneumonia accounted for another 13% of issues, while influenza accounted for the majority of the remaining respiratory issues.

Diseases of the digestive system accounted for a further 11% (1,831) of issues. Stomach conditions, primarily gastritis and acid reflux, made up 57% of digestive issues treated. Intestinal complaints (including gastroenteritis and colitis) accounted for another 30% of issues. The remaining issues included dental conditions, gallstones and hernias.

Endocrine, nutritional, and metabolic disorders accounted for 9% (1,529) of the issues treated. The treatment of diabetes accounted for over 68% of these issues. The remaining issues, including a large number of conditions, including hypothyroidism and other various metabolic disorders.

Ill-defined Conditions and Other factors related to Health Status

Almost 90% (1,557) of these issues were classified as symptoms, signs and ill-defined conditions, with the remaining issues (186) for other factors related to health status. Respiratory symptoms (chest pain, difficulty breathing), tiredness/sleep issues, dizziness, headaches and nosebleeds were the main issues seniors had been treated under the category for symptoms, signs and ill-defined conditions. Issues under the category of supplementary classification primarily involved, the follow-up on the patient for either a transplant or a body part replacement, issue around a patient's medical health/enabling device, and the patient being at risk due to substance abuse/lifestyle (tobacco use, lack of physical exercise and inappropriate diet, and alcohol abuse).

9.2 Patients without Issues

The cost of health centre services to seniors without issues averaged $208,000 per year between 2001/02 and 2005/06.

In terms of unique patient, visit, and service measures of health centre activities, the top five types of services, for seniors without issues were: screenings, diagnostic services, immunizations, administration and planning, and health education (see Table 9.2).

Table 9.2
Health Centre Activity for 65 & up by Top 5 Services
Average 2001/02 to 2005/06

Rank	Metric		
	Unique Patients (954)	Visits (1,216)	Services (1,395)
1	**Immunization 22%**	Diagnostic Services 20%	**Screening 20%**
2	Diagnostic Services 20%	**Immunization 19%**	Diagnostic Services 19%
3	**Screening 14%**	**Screening 14%**	**Immunization 18%**
4	Administration & Planning 8%	Administration & Planning 9%	Administration & Planning 8%
5	**Health Education 7%**	**Support/Referrals 7%**	**Health Education 7%**
Other	29%	32%	29%

Note: Only includes services for non-issue patient visits.
Source: NWT Health and Social Services.

Support/referrals was in the top five for visits only.

Screenings accounted for 20% (276) of the services provided at the health centres. Blood pressure tests accounted for 30% of services. Hemoglobin accounted for 12% of services. TB and vision/hearing tests each made up 10% of services. The remaining screenings services covered a wide range of conditions, including breast exams and pap smears.

Diagnostic services made up 19% (263) of services delivered. Approximately 54% these services were for tests for TB conditions. The remaining diagnostic services were not specified as to disease/condition being looked for. These services included blood tests, urinalysis and X-rays.

Immunizations accounted for 18% (256) of services. Flu shots accounted for 82% of immunization services, with the remaining immunizations primarily including those against pneumonia as well as tetanus and diphtheria.

Administration and planning accounted for 8% (109) of services. Administration and planning centred almost exclusively on planning patient care (case management, correspondence, scheduling appointments etc).

Health education accounted for 7% (91) of services. Instruction around self-care made up 29% of the education services. Education on communicable diseases, breast self-examination and pap smears accounted for 26%, 9% and 6%, respectively. The remaining health education covered a wide range of topics.

Chapter 10: Conclusion

This report presents a detailed look at health centre utilization at the beginning of the 21st century. By examining utilization by age, this report shows not only that the intensity of health centre use changes with age, but also many of the reasons for the use of health centre services change with age. Moreover, many of the reasons for health centre use are preventable by making healthy lifestyle choices.

For infants (under 1) and young children (age 1 to 4), acute respiratory conditions (primarily colds but also bronchitis and pneumonia) and ear infections were primary drivers of health centre use. To some extent respiratory problems in infants are caused and/or exacerbated by environmental effects, such as exposure to second-hand tobacco smoke and poor ventilation in houses. Ear infections also can be caused by tobacco smoke and are more likely to occur when an infant or child spends a lot of time drinking from a sippy cup or bottle while lying on his or her back. [9]

Young children, age 1 to 4, also suffer from preventable dental-related problems such as cavities. Risk factors for dental issues include improper hygiene (lack of brushing), excessive intake of sugary drinks and foods, and overuse of bottles (especially at night) with beverages containing sugar.

Children, age 5 to 14, also require treatment for issues similar to those children under 5, such as respiratory conditions and ear infections. However, injuries rise in prominence as children age, and eventually become the number one issue at health centres for both youth (age 15 to 24) and adults (age 25 to 44).

Injuries are in theory 100% preventable. Many injuries happen through the combination of the lack of use of safety devices, the high-risk behaviour of youth and young adults in general, as well as the prominence of alcohol abuse. [10]

By the time people reach their mid-forties, the types of issues requiring treatment change. Musculoskeletal and connective tissue diseases, circulatory diseases and endocrine, metabolic and nutritional disorders rise in prominence. All three of these issue categories have specific conditions that can be linked to obesity, inactivity, poor diet and other preventable causes.

Osteoarthritis is one of the main musculoskeletal and connective tissue diseases treated at health centres. Obesity, muscle weakness and joint injuries are preventable risk factors leading to osteoarthritis. [11]

[9] U.S. National Library of Medicine and the National Institutes of Health, Ear infection acute in Medline Plus, http://www.nlm.nih.gov/medlineplus/ency/article/000638.htm.

[10] NWT Department of Health and Social Services, Injury in the Northwest Territories: A Summary Report (September 2004), pp. 33 to 40. Those injured in a community with a health centre can be medevac'd to a large centre for special treatment. Nonetheless, health centre resources are still used in such circumstances including such things as caring for the patient and organizing the transportation to another facility.

[11] MayoClinic.com, Osteoarthritis, www.mayoclinic.com/health/osteoarthritis/DS00019/DSECTION=3.

Hypertension is the main reason for health centre care under the category of circulatory diseases. Hypertension can be caused by a number of factors, including too much salt in ones diet, as well as obesity.[12]

Type 2 diabetes is the main issue under health centre care for endocrine, metabolic and nutritional disorders. Preventable factors known to cause type 2 diabetes include: poor diet (high fat and sugar), inactivity and being overweight.[13]

For seniors, the primary issues requiring health centre services not only include hypertension, osteoarthritis and diabetes but also includes osteoporosis and chronic obstructive pulmonary disease (COPD). Osteoporosis is primarily caused by insufficient calcium and Vitamin D intake and often strikes women in their middle age and senior years.[14] COPD is often caused by smoking and/or exposure to second hand tobacco smoke.[15]

This report, the *Hospital Services Report 2006*, the *NWT Health Status Report 2005*, along with other reports, continue to show the need to encourage the population to make the right lifestyle choices to improve their health status. A result of improved health status is a reduction in the use of resources for preventable conditions.

[12] U.S. National Library of Medicine and the National Institutes of Health, Hypertension in Medline Plus, www.nlm.nih.gov/medlineplus/ency/article/000468.htm

[13] Ibid, Type 2 diabetes in Medline Plus, www.nlm.nih.gov/medlineplus/ency/article/000313.htm

[14] Ibid, Osteoporosis in Medline Plus, www.nlm.nih.gov/medlineplus/ency/article/000360.htm

[15] Ibid, Chronic obstructive pulmonary disease in Medline Plus, www.nlm.nih.gov/medlineplus/ency/article/000091.htm

Appendix A: Glossary[16]

[16] The definitions in this glossary are meant to be general and simple. The definitions come from the following sources: www.merck.com; www.medterms.com; www.medlineplus.gov; www.MedicineNet.com; www.eMedicine.com; Dorland's Illustrated Medical Dictionary, 26th Edition (1981); and the National Bureau of Economic Research www.nber.org/mortality/1995/docs/ch05.txt.

Abscess: A collection of pus that has formed on any part of the body surrounded by inflammation (swelling).

Angina: Severe chest pain due to insufficient blood supply to the heart.

Arthritis: Inflammation of a joint characterized by stiffness, swelling and pain. There are many types of arthritis, including osteoarthritis and rheumatoid arthritis.

Asthma: Asthma is a chronic inflammation of the airways (bronchial tubes) that causes swelling and narrowing (constriction) of the airways, and results in the difficulty of breathing.

Bronchitis: Inflammation and swelling of the bronchi - large air tubes leading from the trachea (wind pipe) to the lungs that convey air to and from the lungs.

Candidiasis: A yeast infection often occurring in infants and young children.

Cardiovascular: Refers to the heart and the blood vessels.

Cellulitis: An acute inflammation of the skin and/or tissue underneath the skin (fatty tissue) caused by a bacterial infection.

Chickenpox (Varicella): A viral disease characterized by fluid-filled blisters that burst and form crusts.

Circulatory Diseases: Diseases of the circulatory system, including heart disease and stroke.

Circulatory System: A general term referring to those parts of the body involved in the circulation of blood - heart, arteries, veins and other blood vessels.

Colitis: Inflammation of the colon (large intestine).

Conjunctivitis: Inflammation or infection of the membrane lining the eyelids commonly referred to as pink eye.

Demographics: The characteristics of a population described in terms of size, distribution, composition (e.g. age, gender, ethnicity) and vital statistics.

Digestive System: A general term referring to those parts of the body involved in digesting food - mouth, throat, stomach, and intestines.

Diphtheria: An acute infectious disease caused by the bacteria Corynebacterium diphtheriae.

Eczema: A chronic skin disorder characterized by scaly and itching rashes.

Epilepsy: A brain disorder involving repeated seizures (sudden change in behavior due to an excessive electrical activity in the brain).

Gallstones: Gallstones are formed within the gallbladder, an organ that stores bile excreted from the liver. Substances in the bile can harden and form stones.

Gastritis: Inflammation of the stomach.

Gastroenteritis: Inflammation of the stomach and intestine.

Genitourinary System: A general term referring to the genitals and those parts of the body involved in urination.

Haemophilus Influenzae Type B: A bacteria capable of causing a range of diseases including ear infections, cellulitis (soft tissue infection), upper respiratory infections, pneumonia, and such serious invasive infections as meningitis with potential brain damage.

Hemoglobin: A protein in red blood cells that carries oxygen.

Hemorrhoids: Painful, swollen veins in the lower portion of the rectum or anus.

Hepatitis B: Inflammation of the liver due to a virus that can sometimes cause permanent damage. The Hepatitis B virus is one of several types, A, C, D and E.

Hernia: The protrusion of part of an organ (usually the intestines) through a weak point or tear in the thin muscular wall that holds the abdominal organs in place.

Hypertension: High blood pressure.

Hypothyroidism: A condition in which the thyroid gland fails to produce enough thyroid hormone resulting in a slow metabolism. The thyroid gland, located in the front of the neck just below the larynx, secretes hormones that control metabolism.

Impetigo: Impetigo is a skin disorder caused by bacterial infection and characterized by crusting skin lesions (blisters).

Inflammation: The general way in which the body reacts to infection, irritation or other injury, the key feature being redness, warmth, swelling and pain.

Issue: A general term covering the illness, disease or condition (injury, pregnancy) that the patient has been treated for or assisted with by health centre staff.

Latent Tuberculosis: A condition in which Tuberculosis (TB) bacteria are alive but inactive in the body. People with latent TB infection have no symptoms, don't feel sick, can't spread TB to others, and usually have a positive skin test reaction. However, they may develop TB disease later in life if they do not receive treatment for latent TB infection.

Lipid Metabolism Disorders: A group of diseases whereby the metabolism has problems breaking down lipids (fats) and products of fat metabolizing accumulate in the bodys tissues. Such diseases include: Gaucher's disease, Tay-Sachs disease, Niemann-Pick disease, and Fabry's disease.

Lower Limb: A general term used in describing the location of an injury and includes the area of the body from the hip to the toes.

Measles: An acute and highly contagious viral disease characterized by fever, runny nose, cough, red eyes, and a spreading skin rash.

Meningococcal Type C: Is a type (strain) of meningitis and is contagious. Meningitis is a bacterial infection of the fluid of a person's spinal cord and the fluid that surrounds the brain.

Mumps: An acute, contagious disease that causes painful swelling of the salivary glands.

Musculoskeletal System: A general term describing the bones and muscles of the human body.

Osteoarthritis: A type of arthritis caused by inflammation, breakdown, and eventual loss of cartilage in the joints. Cartilage is a protein substance that serves as a "cushion" between the bones of the joints.

Pap Smear: A microscopic examination of cells scraped from the cervix for the purposes of detecting cervical cancer.

Pertussis: A highly contagious bacterial disease that causes uncontrollable, violent coughing. The coughing can make it hard to breathe. A deep "whooping" sound is often heard when the patient tries to take a breath hence it is often referred to as whooping cough.

Pneumonia: Pneumonia is an inflammation of the lungs caused by an infection. Many different organisms can cause it, including bacteria, viruses and fungi. Pneumonia can range from mild to severe, even fatal. The severity depends on the type of organism causing pneumonia, as well as your age and underlying health.

Poliovirus: A disorder caused by a viral infection. The virus, known as poliovirus, infects nerves. This infection can lead to temporary paralysis or, in more severe cases, permanent paralysis or death.

Reproductive Services: Includes services specific to before and after childbirth (assessment, counseling and education), as well as birth control dispensing and management.

Respiratory System: A general term referring to the parts of the body involved in the process of breathing: nose, throat, and lungs.

Rheumatism: Rheumatism is used to describe any of a number of painful conditions of muscles, tendons, joints, and bones.

Rheumatoid Arthritis: Rheumatoid arthritis is an autoimmune disease that causes chronic inflammation of the joints, and can also cause inflammation of the tissue around the joints, as well as other organs in the body. Autoimmune diseases are illnesses that occur when the body tissues are mistakenly attacked by the bodys own immune system.

Service: A general term covering the public health or preventative activity of health centre staff provided to patients and their caregivers (parents of infants/children) when an issue was not the reason for the visits. Such services include community health services (counseling, education, screening etc) and immunization activity.

Screening: Performing tests on a patient often part of routine assessment of the population. Such tests include: pap smears, blood pressure tests, TB tests, and hemoglobin tests.

Stomatitis: Inflammation of the mucous lining of any of the structures in the mouth, which may involve the cheeks, gums, tongue, lips, and roof or floor of the mouth.

Tetanus: A potentially deadly nervous system disease due to the bacteria Clostridium tetani (C. tetani).

Tonsillitis: Tonsillitis is inflammation of the tonsils.

Tuberculosis: A highly contagious infection caused by the bacterium called Mycobacterium tuberculosis.

Unique Patient: When a patient is only counted once in a fiscal year by variable (e.g., age group, diagnosis), regardless of how many times they may have been to the health centre.

Upper Limb: A general term used in describing the location of an inju y and includes the area of the body from the shoulder to the fingers.

Visit: A general term used to describe an encounter (time between entering and leaving) at the health centre.

Appendix B: Tables

Table 1.1

Health Centre Activity with Issues - Various Indicators
Average, 2001/02 to 2005/06

Variables	Total Patients			Total Visits			Total Issues			Expenditure		
	Both	Female	Male	Both	Female	Male	Both	Female	Male	Both	Female	Male
Total	10,920	5,526	5,394	65,648	37,287	28,361	81,769	46,757	35,012	$14,813,702	$8,518,487	$6,295,215
Age												
Under 1	374	193	181	1,937	958	979	2,398	1,175	1,224	$426,001	$218,302	$207,699
1 to 4	973	483	490	4,319	2,112	2,207	5,258	2,565	2,693	$820,321	$394,667	$425,655
5 to 14	2,108	1,065	1,044	6,808	3,489	3,319	7,768	3,995	3,773	$1,372,651	$696,786	$675,866
15 to 24	1,772	959	813	7,019	4,466	2,553	8,394	5,426	2,969	$1,686,854	$1,109,347	$577,507
25 to 44	3,323	1,713	1,610	17,397	11,025	6,372	20,816	13,361	7,455	$4,026,832	$2,600,070	$1,426,762
45 to 64	1,976	943	1,032	15,132	8,649	6,483	18,525	10,666	7,859	$3,462,522	$1,952,624	$1,509,898
65 & Up	835	410	425	13,037	6,590	6,448	18,609	9,570	9,039	$3,018,521	$1,546,692	$1,471,829
Ethnicity												
Dene	7,198	3,716	3,482	44,555	25,885	18,670	56,229	32,927	23,302	$9,943,084	$5,830,701	$4,112,382
Inuit	1,961	1,033	928	12,831	7,521	5,310	15,334	9,040	6,293	$2,928,521	$1,758,393	$1,170,128
Non-Aboriginal/Metis	1,761	777	984	8,262	3,882	4,380	10,206	4,789	5,416	$1,942,097	$929,393	$1,012,705
Disease and Conditions (Issues)												
Infectious and Parasitic	1,733	1,075	658	2,707	1,727	980	2,738	1,746	992	n/a	n/a	n/a
Neoplasms	184	102	82	873	471	402	892	478	414	n/a	n/a	n/a
Endocrine, Nutritional, and Metabolic	973	557	415	4,056	2,336	1,720	4,159	2,399	1,760	n/a	n/a	n/a
Blood and Blood Forming Organs	361	238	123	931	616	315	934	618	316	n/a	n/a	n/a
Mental Disorders	1,308	766	542	3,791	2,251	1,540	4,081	2,437	1,644	n/a	n/a	n/a
Nervous System and Sense Organs	2,819	1,536	1,283	6,110	3,224	2,886	6,292	3,321	2,971	n/a	n/a	n/a
Circulatory System	1,104	537	567	6,424	2,790	3,634	7,100	3,081	4,019	n/a	n/a	n/a
Respiratory System	4,540	2,566	1,973	10,628	6,052	4,575	11,214	6,394	4,820	n/a	n/a	n/a
Digestive System	3,109	1,692	1,417	7,178	4,007	3,171	7,465	4,158	3,308	n/a	n/a	n/a
Genitourinary System	2,103	1,713	391	4,827	3,859	968	4,978	3,991	987	n/a	n/a	n/a
Childbirth and Pregnancy	309	309	na	719	719	na	912	912	na	n/a	n/a	n/a
Skin and Subcutaneous Tissue	2,252	1,223	1,029	4,449	2,389	2,060	4,624	2,484	2,141	n/a	n/a	n/a
Musculoskeletal System and Connective Tissue	2,744	1,444	1,300	7,608	4,613	2,995	8,023	4,901	3,122	n/a	n/a	n/a
Congential Anomalies	37	20	17	57	31	26	58	31	26	n/a	n/a	n/a
Perinatal Period	36	18	18	57	28	28	57	29	29	n/a	n/a	n/a
Injury and Poisoning	4,038	1,824	2,214	7,583	3,333	4,250	7,929	3,478	4,451	n/a	n/a	n/a
Total Diagnosed	10,571	5,364	5,208	67,996	38,448	29,548	71,457	40,458	30,998	n/a	n/a	n/a
Symptoms, Signs and Ill-Defined Conditions	3,819	2,185	1,634	7,566	4,516	3,050	7,911	4,718	3,193	n/a	n/a	n/a
Supplementary Classifications	1,146	774	373	1,628	1,048	580	2,392	1,581	811	n/a	n/a	n/a
Unknown	8	0	8	9	0	9	9	0	9	n/a	n/a	n/a

Sources: NWT Department of Health and Social Services and NWT Financial Management Board Secretariat.

Table 1.2

Health Centre Activity with Issues - Various Indicators (Continued)
Average, 2001/02 to 2005/06

Variables	Visits Per Patient			Issues per Patient			Issues per Visit		
	Both	Female	Male	Both	Female	Male	Both	Female	Male
Total	6.0	6.7	5.3	7.5	8.5	6.5	1.2	1.3	1.2
Age									
Under 1	5.2	5.0	5.4	6.4	6.1	6.8	1.2	1.2	1.3
1 to 4	4.4	4.4	4.5	5.4	5.3	5.5	1.2	1.2	1.2
5 to 14	3.2	3.3	3.2	3.7	3.8	3.6	1.1	1.1	1.1
15 to 24	4.0	4.7	3.1	4.7	5.7	3.7	1.2	1.2	1.2
25 to 44	5.2	6.4	4.0	6.3	7.8	4.6	1.2	1.2	1.2
45 to 64	7.7	9.2	6.3	9.4	11.3	7.6	1.2	1.2	1.2
65 & Up	15.6	16.1	15.2	22.3	23.4	21.3	1.4	1.5	1.4
Ethnicity									
Dene	6.2	7.0	5.4	7.8	8.9	6.7	1.3	1.3	1.2
Inuit	6.5	7.3	5.7	7.8	8.8	6.8	1.2	1.2	1.2
Other	4.7	5.0	4.5	5.8	6.2	5.5	1.2	1.2	1.2
Disease and Conditions									
Infectious and Parasitic	1.6	1.6	1.5	1.6	1.6	1.5	1.0	1.0	1.0
Neoplasms	4.7	4.6	4.9	4.9	4.7	5.1	1.0	1.0	1.0
Endocrine, Nutritional, and Metabolic	4.2	4.2	4.1	4.3	4.3	4.2	1.0	1.0	1.0
Blood and Blood Forming Organs	2.6	2.6	2.6	2.6	2.6	2.6	1.0	1.0	1.0
Mental Disorders	2.9	2.9	2.8	3.1	3.2	3.0	1.1	1.1	1.1
Nervous System and Sense Organs	2.2	2.1	2.2	2.2	2.2	2.3	1.0	1.0	1.0
Circulatory System	5.8	5.2	6.4	6.4	5.7	7.1	1.1	1.1	1.1
Respiratory System	2.3	2.4	2.3	2.5	2.5	2.4	1.1	1.1	1.1
Digestive System	2.3	2.4	2.2	2.4	2.5	2.3	1.0	1.0	1.0
Genitourinary System	2.3	2.3	2.5	2.4	2.3	2.5	1.0	1.0	1.0
Childbirth and Pregnancy	na	2.3	na	3.0	3.0	na	1.3	1.3	na
Skin and Subcutaneous Tissue	2.0	2.0	2.0	2.1	2.0	2.1	1.0	1.0	1.0
Musculoskeletal System and Connective Tissue	2.8	3.2	2.3	2.9	3.4	2.4	1.1	1.1	1.0
Congential Anomalies	1.6	1.6	1.6	1.6	1.6	1.6	1.0	1.0	1.0
Perinatal Period	1.6	1.6	1.5	1.6	1.6	1.6	1.0	1.0	1.0
Injury and Poisoning	1.9	1.8	1.9	2.0	1.9	2.0	1.0	1.0	1.0
Total Diagnosed	6.4	7.2	5.7	6.8	7.5	6.0	1.1	1.1	1.0
Symptoms, Signs and Ill-Defined Conditions	2.0	2.1	1.9	2.1	2.2	2.0	1.0	1.0	1.0
Supplementary Classifications	1.4	1.4	1.6	2.1	2.0	2.2	1.5	1.5	1.4
Unknown	1.1	0.0	1.1	1.2	0.0	1.2	1.1	0.0	1.1

Source: NWT Department of Health and Social Services.

Table 1.3

Health Centre Activity with Issues - Various Indicators (Continued)

Average, 2001/02 to 2005/06

Variables	Cost Per Patient			Costs Per Visit			Costs Per Issue		
	Both	Female	Male	Both	Female	Male	Both	Female	Male
Total	$1,357	$1,542	$1,167	$226	$228	$222	$181	$182	$180
Age									
Under 1	$1,138	$1,130	$1,148	$220	$228	$212	$178	$186	$170
1 to 4	$843	$817	$869	$190	$187	$193	$156	$154	$158
5 to 14	$651	$655	$648	$202	$200	$204	$177	$174	$179
15 to 24	$952	$1,157	$711	$240	$248	$226	$201	$204	$195
25 to 44	$1,212	$1,518	$886	$231	$236	$224	$193	$195	$191
45 to 64	$1,753	$2,070	$1,463	$229	$226	$233	$187	$183	$192
65 & Up	$3,616	$3,774	$3,463	$232	$235	$228	$162	$162	$163
Ethnicity									
Dene	$1,381	$1,569	$1,181	$223	$225	$220	$177	$177	$176
Inuit	$1,494	$1,703	$1,261	$228	$234	$220	$191	$195	$186
Other	$1,103	$1,196	$1,029	$235	$239	$231	$190	$194	$187
Disease and Conditions									
Infectious and Parasitic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Neoplasms	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Endocrine, Nutritional, and Metabolic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Blood and Blood Forming Organs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Mental Disorders	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nervous System and Sense Organs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Circulatory System	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Respiratory System	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Digestive System	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Genitourinary System	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Childbirth and Pregnancy	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Skin and Subcutaneous Tissue	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Musculoskeletal System and Connective Tissue	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Congential Anomalies	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Perinatal Period	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Injury and Poisoning	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Diagnosed	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Symptoms, Signs and Ill-Defined Conditions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supplementary Classifications	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Unknown	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Sources: NWT Department of Health and Social Services and NWT Financial Management Board Secretariat.

Table 6.4

Health Centres Activity without Issues - Various Indicators

Average, 2001/02 to 2005/06

Variables	Total Patients			Total Visits			Total Services			Expenditure		
	Both	Female	Male	Both	Female	Male	Both	Female	Male	Both	Female	Male
Total	6,325	3,666	2,659	15,974	10,366	5,608	32,043	21,816	10,227	$3,777,527	$2,562,923	$1,214,604
Age												
Under 1	376	194	182	1,494	778	716	4,355	2,257	2,098	$387,383	$202,308	$185,075
1 to 4	711	356	355	1,365	673	691	3,834	1,942	1,892	$348,941	$171,788	$177,153
5 to 14	1,040	540	499	2,438	1,308	1,130	3,385	1,835	1,549	$477,313	$255,824	$221,489
15 to 24	1,108	759	349	3,331	2,599	732	6,632	5,511	1,121	$801,968	$670,299	$131,669
25 to 44	1,838	1,187	650	4,659	3,576	1,083	9,313	7,595	1,718	$1,149,712	$920,501	$229,210
45 to 64	986	521	465	1,731	980	751	3,130	1,998	1,132	$404,111	$239,604	$164,507
65 & Up	484	232	252	956	451	505	1,395	678	717	$208,099	$102,599	$105,500
Ethnicity												
Dene	4,273	2,505	1,768	11,233	7,345	3,888	22,064	15,124	6,940	$2,606,000	$1,781,487	$824,513
Inuit	1,073	640	433	2,658	1,784	874	5,443	3,786	1,657	$625,800	$438,174	$187,626
Non-Aboriginal/Metis	979	521	458	2,083	1,237	846	4,536	2,907	1,630	$545,727	$343,262	$202,465
Community Health Services												
Administration and Planning	819	522	297	1,017	664	353	1,072	701	371	n/a	n/a	n/a
Contact Tracing	286	144	142	349	178	171	352	180	172	n/a	n/a	n/a
Counseling	639	427	212	754	500	254	823	556	267	n/a	n/a	n/a
Diagnostic	1,447	874	574	1,902	1,207	696	2,032	1,273	760	n/a	n/a	n/a
Dispensing Medication	433	294	139	484	335	149	486	336	149	n/a	n/a	n/a
Exam	822	370	451	917	411	506	920	412	508	n/a	n/a	n/a
Health Assessment	1,173	723	449	1,484	906	579	1,497	915	583	n/a	n/a	n/a
Health Education	1,824	1,236	588	2,601	1,748	853	4,204	2,779	1,425	n/a	n/a	n/a
Immunization	2,471	1,298	1,173	3,772	1,987	1,785	4,695	2,467	2,228	n/a	n/a	n/a
Reproductive Services	1,056	1,056	n/a	3,276	3,276	n/a	4,501	4,501	n/a	n/a	n/a	n/a
Screening	3,165	1,975	1,190	5,206	3,313	1,893	8,991	6,295	2,696	n/a	n/a	n/a
Support/Referrals	499	329	170	583	387	196	638	419	219	n/a	n/a	n/a
TB Therapy	137	74	63	1,616	875	741	1,696	926	770	n/a	n/a	n/a
Other	82	40	43	109	53	56	110	53	57	n/a	n/a	n/a
Unknown	22	3	18	24	3	21	25	3	22	n/a	n/a	n/a
Total Services	14,874	9,365	5,510	24,092	15,842	8,251	32,043	21,816	10,227	n/a	n/a	n/a

Sources: NWT Department of Health and Social Services and NWT Financial Management Board Secretariat.

Table 1.5

Health Centres -Activity without Issues - Various Indicators (Continued)
Average, 2001/02 to 2005/06

Variables	Visits Per Patient			Services per Patient			Services per Visit		
	Both	Female	Male	Both	Female	Male	Both	Female	Male
Total	2.5	2.8	2.1	5.1	6.0	3.8	2.0	2.1	1.8
Age									
Under 1	4.0	4.0	3.9	11.6	11.6	11.5	2.9	2.9	2.9
1 to 4	1.9	1.9	1.9	5.4	5.5	5.3	2.8	2.9	2.7
5 to 14	2.3	2.4	2.3	3.3	3.4	3.1	1.4	1.4	1.4
15 to 24	3.0	3.4	2.1	6.0	7.3	3.2	2.0	2.1	1.5
25 to 44	2.5	3.0	1.7	5.1	6.4	2.6	2.0	2.1	1.6
45 to 64	1.8	1.9	1.6	3.2	3.8	2.4	1.8	2.0	1.5
65 & Up	2.0	1.9	2.0	2.9	2.9	2.8	1.5	1.5	1.4
Ethnicity									
Dene	2.6	2.9	2.2	5.2	6.0	3.9	2.0	2.1	1.8
Inuit	2.5	2.8	2.0	5.1	5.9	3.8	2.0	2.1	1.9
Other	2.1	2.4	1.8	4.6	5.6	3.6	2.2	2.3	1.9
Community Health Services									
Administration and Planning	1.2	1.3	1.2	1.3	1.3	1.2	1.1	1.1	1.1
Contact Tracing	1.2	1.2	1.2	1.2	1.3	1.2	1.0	1.0	1.0
Counseling	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1
Diagnostic	1.3	1.4	1.2	1.4	1.5	1.3	1.1	1.1	1.1
Dispensing Medication	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0
Exam	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0
Health Assessment	1.3	1.3	1.3	1.3	1.3	1.3	1.0	1.0	1.0
Health Education	1.4	1.4	1.5	2.3	2.2	2.4	1.6	1.6	1.7
Immunization	1.5	1.5	1.5	1.9	1.9	1.9	1.2	1.2	1.2
Reproductive Services	n/a	3.1	n/a	n/a	4.3	n/a	n/a	1.4	n/a
Screening	na	1.7	na	2.8	3.2	na	1.7	1.9	na
Support/Referrals	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1
TB Therapy	11.8	11.8	11.7	12.3	12.5	12.1	1.0	1.1	1.0
Other	1.3	1.3	1.3	1.3	1.3	1.3	1.0	1.0	1.0
Unknown	1.1	1.0	1.1	1.2	1.0	1.2	1.1	1.0	1.1
Total Services	1.6	1.7	1.5	2.2	2.3	1.9	1.3	1.4	1.2

Source: NWT Department of Health and Social Services.

Table 1.6

Health Centres Activity without Issues - Various Indicators (Continued)
Average, 2001/02 to 2005/06

Variables	Cost Per Patient			Costs Per Visit			Costs Per Service		
	Both	Female	Male	Both	Female	Male	Both	Female	Male
Total	$597	$699	$457	$236	$247	$217	$118	$117	$119
Age									
Under 1	$1,031	$1,044	$1,018	$259	$260	$258	$89	$90	$88
1 to 4	$490	$483	$498	$256	$255	$256	$91	$88	$94
5 to 14	$459	$474	$444	$196	$196	$196	$141	$139	$143
15 to 24	$724	$884	$377	$241	$258	$180	$121	$122	$117
25 to 44	$626	$775	$352	$247	$257	$212	$123	$121	$133
45 to 64	$410	$460	$354	$233	$244	$219	$129	$120	$145
65 & Up	$430	$443	$418	$218	$227	$209	$149	$151	$147
Ethnicity									
Dene	$610	$711	$466	$232	$243	$212	$118	$118	$119
Inuit	$583	$685	$433	$235	$246	$215	$115	$116	$113
Other	$557	$659	$442	$262	$277	$239	$120	$118	$124
Community Health Services									
Administration and Planning	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Contact Tracing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Counseling	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Diagnostic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dispensing Medication	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Exam	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Health Assessment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Health Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Immunization	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Reproductive Services	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Screening	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Support/Referrals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TB Therapy	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Unknown	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Services	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Sources: NWT Department of Health and Social Services and NWT Financial Management Board Secretariat.

Appendix C: Data and Methodology

1.0 Data

The health data: unique patients, visits, issues and services come from an extract of the health centre claims system called Health Suite. Health Suite is used by department staff to enter the forms, filled out by nurses and clerical staff at the health centres, that track the service events occurring at a health centre.

Financial data came from a combination of sources: Health Suite (service time), the Finance Division in the Department of Health and Social Services, and the GNWT Main Estimates (the 57 actuals for 2001/02 to 2005/06). See section 2.4 for more detail on the methodology behind the estimation of health centre service costs.

This report contains time-sensitive information. The information in this report may be updated, amended, supplemented or otherwise altered by subsequent reports and presentations. There are two main reasons why the data may change: 1) data entry delays in administrative data; and/or 2) system changes to how the service events (data) are defined and recorded. All subsequent changes are expected to be minor and of no significance to the conclusions reached in this report.

2.0 Methodology

2.1 Age Groups

The age groups have been chosen because they provide natural cut-offs for different time periods in a persons life.

Children under the age of 1 are vulnerable and often require regular health services (check ups/assessments and treatment) for a number of conditions, including common ailments such as colds, ear infections and gastrointestinal infections.

As a child moves beyond its first year of life into the toddler and preschool years, its immune system becomes more resilient to diseases. The requirement for health system intervention reduces with every year of age.

As children enter the school years, they require the least amount of treatment services from the health centre system. The rank order of conditions requiring treatment change, with injury and poisoning rising in prominence over nervous system issues (ear and eye infections).

As children become teenagers and then young adults, the utilization of health care services increases and the reasons for using such services change. Injuries rise in prominence and the requirement for reproductive-related services dominate visits where patients did not have an issue.

As youth move into their adult years, utilization increases and the issues change again. Injuries remain prominent, but arthritis-related conditions start to increase in prominence. Reproductive-related services on the public health side of the health centre business remain in high demand. Screening services take on a greater role in the early detection of disease. Into the middle age years, arthritis-related issues and diabetes rise in prominence, as do circulatory issues (high blood pressure). Screening services remain prominent on the non-issue side of service demand.

While patients in their senior years suffer from similar problems as adults in their forties and fifties (arthritis and high blood pressure), the number of visits double per patient per year.

2.2 Reasons for Health Centre Use

Health centres provide two general roles in the health care system in communities where hospitals, resident physician services and public health units do not exist. One, they provide the first contact of care for people who have a health issue (illness/injury); and two, they provide a public health role in disease prevention. As they provide these two roles, the way health centre activity is examined is twofold: one, a documentation of those issues that are treated; and two, a documentation of those public health related services where the patient did not present an issue.

Public health services do overlap with treatment of issues. Moreover, these services, such as screenings, are directly provided to diagnosis and treat issues. Unfortunately, these services cannot be disaggregated in a particular visit in order to determine which service is provided for a particular issue. The reason for this is that services are recorded separately from the issues that were seen at the health centre. Only the visits where one issue existed can the services be attached to the issue. Often the patient will visit the health centre with more than one issue.

2.2.1 Issue Categories

When reasons or causes of health centre use are to do with an illness or injury, they are classified as an issue. For the most part, issue codes are International Classification of Diseases, 9th Revision (ICD-9) codes. There are 16 Classification (or Chapters) for 58 known or 58 suspected medical conditions that are relevant to this report (see below). Each one of these chapters contains several hundred codes, each of which provides a particular identification of the medical condition in question. Codes that make up the chapter are presented in sub-groupings, e.g., intestinal conditions, gallstones, gastritis, hernias and ulcers as sub-groupings of digestive diseases.

The following is a list of the ICD-9 chapters that are often in the top five, for most age groups, as reasons for health centre utilization in the Northwest Territories:

1. Diseases of the Respiratory System (common cold, asthma, pneumonia, influenza);
2. Diseases of the Digestive System (dental issues, intestinal conditions, gastritis, hernias);
3. Injury and Poisoning (fractures, sprains, bruises, cuts); and
4. Diseases of the Musculoskeletal System and Connective Tissue (arthritis).

The following is a list of the ICD-9 chapters that occur in the top five on occasion:

1. Diseases of the Nervous System and Sense Organs (ear and eye infections);
2. Diseases of the Circulatory System (heart attacks, strokes);
3. Diseases of the Skin and Subcutaneous Tissue (eczema and impetigo);
4. Infectious and Parasitic Diseases (intestinal infections and whooping cough);
5. Diseases of the Genitourinary System (urinary tract infections); and
6. Endocrine, Nutritional, and Metabolic Diseases, and Immunity Disorders (diabetes).

The following is a list of the remaining ICD-9 chapters that do not occur in the top five:

1. Neoplasms;
2. Diseases of the Blood and Blood-Forming Organs;
3. Mental Disorders;
4. Complications of Pregnancy, Childbirth, Pregnancy and the Puerperium;
5. Congenital Anomalies; and
6. Conditions Originating in the Perinatal Period.

One other ICD-9 chapter and one customized Community Health Centre issue code chapter is examined in each chapter:

1. Symptoms, Signs and Ill-Defined Conditions (pains, dizziness, fainting etc); and
2. Other Factors related to Health Centre Use (patients at risk of an illness, social problem).[2]

2.2.2 Service Code Categories

These categories have been developed to suit the operations of NWT health centre and public health unit system. Essentially referred to as service or community health codes, there are 13 categories used in this report to group services provided when there was no issue present.

The following is a list of the service code categories, customized for this report, that are often in the top five, for most age groups, as reasons for health centre utilization (when an issue is not present) in the Northwest Territories:

1. Screening (TB tests, blood pressure tests)
2. Immunizations (flu shots, diphtheria, tetanus, pertussis)
3. Health Education (how to prevent sexually transmitted diseases)

2. This grouping of codes is similar to codes included in the ICD-9 chapter called Supplementary Classification of Factors Influencing Health Status and Contact with Health Services.

The following is a list of the service categories that occur in the top five on occasion:

1. Diagnostic Services (blood tests, urinalysis, tests
2. TB Therapy (treatment of those with TB or with latent TB
3. Reproductive Services (pre and post natal care)
4. Health Assessments (assessing the patients needs)
5. Administration and Planning (booking and organizing appointments with health professionals and medical travel for patients)

The following is a list of the service categories that rarely, or do not, occur in the top five:

1. CounselingExams
2. Contact Tracing
3. Dispensing Medication
4. Support/Referrals

2.3 Metrics

The main body of the report focuses on proportions. Numbers are presented to provide an indication of the magnitude of patient volume and cost.

Issues and services, as opposed to unique patients or visits, are the central units of analysis in the each chapter. Visits can have more than one issue or more than one service and therefore can be counted more than once when analyzed by issue or service category.

Unique patients can also be counted more than once per year depending on what variable is being measured (issue type or age group).

2.4 Expenditures

Health Suite does not directly capture the actual or estimated cost of health centre services. It does capture an estimate of the time spent with each patient for each visit to a health centre.

For the purposes of estimating the cost of services provided to patients, the time amounts captured in Health Suite have been changed into dollars. The model used to extrapolate costs from time is as follows. First the amount time for all health centre activities is summed for each fiscal year. Second, the total amount of time is divided against the estimated amount of money expended on health centres to arrive at an estimated cost per minute. Third, the average cost per minute is multiplied against the total time spent on patient by the type of analysis being done. For example, the total amount of time spent on patients age 1 to 4 is then multiplied against the average cost per minute, to come up with an estimate the amount of resources provided to those children.

Expenditure estimates are restricted to general measures of visits with or without issues. It is not possible to break out the cost of treating each illness since a visit can have more than one issue, and the time to treat each issue or provide each service is not specified. Moreover, unlike hospital data, the primary reason for requiring health centre care is not identified. Where the cost of services is discussed, it must be noted that this is an estimate produced for the purposes of this report only and should not be quoted out of the context of this report.

2.5 Communities with Health Centres

Aklavik
Behchokǫ̀
Deline
Fort Good Hope
Fort Liard
Fort McPherson
Fort Providence
Fort Resolution
Fort Simpson
Gametì
Lutselk'e
Norman Wells
Paulatuk
Sachs Harbour
Tsiigehtchic
Tuktoyaktuk
Tulita
Ulukhaktok
Whatì

2.6 Exclusions:

Data where age, sex, ethnicity, community was missing from the record were excluded. These records represent a small amount of data (under 5%). However, they were included in the determination of the average cost per minute.

Non-resident health centre service utilization has also been excluded.

Services to groups of people (health education to a classroom of students) have been excluded. Information on such services is not analytically compatible with information on services to individuals.

2.7 Further information:

For further information on data, methodology, or any other aspect of this report, please contact the Planning, Accountability and Reporting Division of the NWT Department of Health and Social Services (867-920-3361).